Maria Bloch-Trojnar

Polyfunctionality in Morphology
A Study of Verbal Nouns in Modern Irish

Contents

Abbreviations and Symbols

A / adj.	Adjective
Acc.	Accusative Case
Agr	Agreement
C	Consonant
CCED	Collins Cobuild English Dictionary
COMP	Complementiser
Comp.	Comparative
Cond.	Conditional
Count.	Countable
Dat.	Dative Case
Dim.	Diminutive
F2	Feminine noun 2nd declension
F3	Feminine noun 3rd declension
Fem.	Feminine Gender
Fin.	Finite
Gen.	Genitive Case
Imper.	Imperative
Ind.	Indicative
Infl	Inflection (node)
LMBM	Lexeme Morpheme Base Morphology
M1	Masculine noun 1st declension
M2	Masculine noun 2nd declension
Masc.	Masculine Gender
Mid. Ir.	Middle Irish
Mod. Ir.	Modern Irish
MS	Morphological Spelling
N	Noun
Nom.	Nominative Case
NP	Noun Phrase
O	Object
ÓD	Ó Dónaill
OED	Oxford English Dictionary
O.I.	Old Irish
P&P	Principles and Parameters
Pers.	Person

Pl.	Plural
PP	Prepositional Phrase
PPRT	Past Participle
Pres.	Present Tense
PROG.	Progressive
PRT	Particle
S	Subject
Sg.	Singular
Uncount.	Uncountable
V	Verb / Vowel
VA	Verbal Adjective
VN	Verbal Noun
VP	Verb Phrase
WF	Word Formation
WFR	Word Formation Rule

$*$	Ungrammatical and/or unattested
?	Potential; grammatical
#	Blocked
$\forall$:	Quantifier 'for every '
X	Symbol to be replaced with a lexical item possessing the feature complex
$\exists$ Z: Z =	There is such a Z (standing for a word-form) that
P	Palatalisation
$-$P	Depalatalisation
$\emptyset$	Lack of morphophonological modification
L	Lenition
E	Eclipsis

Introduction

The purpose of this work is to provide a formal account of the morphology of verbal nouns in Modern Irish (henceforth VNs). This category has been selected for an in-depth analysis on two counts. Firstly, the study is meant as a contribution to Celtic Studies insofar as the complexity and importance of the category in question has yet to receive comprehensive coverage. Secondly, the analysis of VNs in Irish cannot be conducted without resolving certain problems pertaining to morphological theory in general. Current morphological theory is far from monolithic and in the course of our analysis we will be forced to take a stand with regard to various notions, which do not cease to be the subject of intense debate. One issue which will recur is the question of the 'double articulation' of language, i.e. the mapping between form and content. One must decide whether to view morphology as a set of constraints on well formed structures made up of morphemes, which enjoy the status of signs in de Saussure's sense, or whether to regard it as processual with morphemes merely spelling out the intricate system of linguistic relations and contrasts. Another thread running through this study is the distinction between inflection and derivation. We will have to decide whether this distinction is spurious or genuine. We will also address problems regarding the content and structure of the lexicon, productivity, and constraints imposed on affixation. The Irish data are frequently presented in a broader linguistic perspective as reference is made to other languages. This work, then, sets itself both descriptive and theoretical goals. The grammatical category of VNs in Irish will be subjected to a detailed analysis, with a view to appraising the descriptive and explanatory potential of the theoretical model we advocate.

In the first chapter we specify the scope of our research and sources. We briefly make the acquaintance of the basic rules of the Irish spelling system and pronunciation. We also survey some basic issues surrounding the question of VNs in Modern Irish. Then we turn to the English suffix *-ing*, which could be regarded as the counterpart of the various exponents realising the category of VN in Irish. The examination of inflectional and derivational categories marked by *-ing* is intended to facilitate our understanding of the Irish material, and it also serves as a prelude to the discussion regarding the choice of a theoretical model. The final section of this chapter is devoted to the presentation of the basic tenets of the model we commit ourselves to, namely – Lexeme/Morpheme Base Morphology (henceforth LMBM). This framework, devised and refined by

Beard (1976, 1985, 1995 inter alia), in our view explains satisfactorily how to deal with cases where the same morphophonological devices mark categorially distinct items, because it separates the functional aspect from its phonological realisation. Thus, each morphological operation has two facets: the abstract one, which encompasses semantic and syntactic changes, and the formal one – affixation.

Chapter Two is a survey of the grammatical categories encompassed by what are traditionally referred to as VNs. A detailed syntactic analysis makes it possible to draw a distinction between nominal and verbal categories, although VNs in the progressive construction appear to be a borderline case. However, by applying various syntactic, morphological and other criteria we are able to justify their verbal status. Among other things, we demonstrate that what traditional grammars regard as the genitive case of the VN is a positional variant of the active participle. In this chapter we also give formal expression to the inflectional and derivational rules connected with VNs.

Chapter Three subjects to close scrutiny the morphophonological exponents spelling out the categories specified in the previous chapter. First we discuss verbal morphology in Irish in order to establish the base for the multifarious modifications. Then we provide a brief résumé of the affixation operations put forward by Ó Siadhail (1989). The main part of this chapter is devoted to genuinely productive suffixes and the constraints on their attachment. In the final section we undertake the arduous task of providing an exhaustive list of lexically marked items.

In the conclusion we summarise the most important ideas that have emerged in the course of our discussion, and their implications for morphological theory.

1 Preliminaries

1. Scope of research and sources

The continuum of the written development of Irish is generally divided by scholars into four periods: Old Irish (c. A. D. 600 – 900), Middle Irish (c. 900 – 1200), Early Modern Irish (c. 1200 – 1600), and the Modern Irish period which dates from 1600 onwards.

There are three major dialects in Modern Irish: Donegal, Connacht and Munster. Overall, a fundamental distinction can be made between northern and southern Irish (O'Rahilly 1932: 17-18), with Connacht and Donegal falling into the northern group and Munster representing the south. The greatest degree of variation can be observed in the area of phonetics and phonology. In our study we adhere to the standard orthography introduced in the 1940s, and adopt the system of pronunciation devised by Institiúid Teangeolaíochta Éireann to assist in the publication of the first dictionary with phonetic transcription – *Foclóir Póca* (1986). The system in question contains the common core of contrasts attested in the three main dialects.

Our main sources are: Dinneen (1927), de Bhaldraithe (1953), Ó Dónaill (1977), Doyle and Gussmann (1996), and Ó hAnluain (1999). We also consulted the following: Sjoestedt-Jonval (1931, 1938), Ó Cuív (1944), Wagner (1958-69), de Bhaldraithe (1959), Ó Siadhail (1989), Doyle (1992), Doyle and Gussmann (1997), Cyran (1997), Ó Sé (2000) and Doyle (2001). Some extra material (word lists such as for example Breatnach 1984 or de Bhaldraithe 1985b) was used for chapter 3.

2. Basic Facts about the Irish spelling system and pronunciation

This section summarises the main points concerning the Irish spelling system and pronunciation. Morphological and syntactic characteristics relevant to our analysis will be presented as our discussion unfolds. The phonetic transcription provided follows I. P. A. notation. The diacritic [ʹ] following a consonant indicates palatalisation. The symbol [ʃ] stands for the palato-alveolar fricative and [ə] represents a reduced vowel. With respect to *Foclóir Póca* (FP) we introduce finer distinctions as far as the low vowel is concerned. In FP only one symbol [a] is employed. In our transcription [a] is a low front vowel used in the neighbourhood of palatalised consonants, and [ɑ] is its back counterpart, as in

for example *bean* [b´an], *mac* [mɑk], *ard* [ɑːrd] and *tá* [tɑː]. We also depart from FP in transcribing word final *-gh* as [g´] rather than [ɣ´] or [iː], e.g. *nigh* [n´ig´], *ceannaigh* [k´anəg´].

2.1. Vowels

Vowels can be either short or long. Length is indicated by means of a length mark over a vowel: á [ɑː], é [eː], í [iː], ó [oː], ú [uː]. Certain consonant clusters, e.g. *rd, rl, rn* cause lengthening or diphthongisation of preceding vowels, e.g. *ard* [ɑːrd] 'tall'. Some vowel sequences *ae, ao, omh, umh, eo* are pronounced as single long vowels, e.g. *Gael* [geːl] 'Irishman', *ceol* [k´oːl] 'music'. Other groups of vowels stand for diphthongs: *fuar* [fuər] 'cold'. Vowels often mark the palatal or non-palatal quality of adjacent consonants and are not pronounced, e.g. *beo* [b´oː] 'alive'. Unstressed short vowels are reduced to [ə] – *balla* [bɑlə] 'wall'.

2.2. Consonants

A feature of Irish is the existence of two sets of consonants traditionally called 'broad' and 'slender', which in linguistic terms correspond to non-palatalised and palatalised respectively. A consonant is as a rule broad when it precedes or follows one of the back vowels [ɑ o u ɑː oː uː], and slender when it occurs in the environment of a front vowel [a e eː iː].

Another characteristic trait of Irish are the initial mutations of consonants triggered by morphosyntactic factors. Lenition, which in spelling is marked by *h* following a consonant, produces spirants. Eclipsis is indicated in spelling by certain consonant clusters and evokes the voicing or nasalisation of the affected consonant. The diagram below depicts lenition in (1a) and eclipsis in (1b).

(1)	**p**	**t**	**c**	**b**	**d**	**g**	**m**	**f**	**s**	**ʃ**
a.	ph [f]	th [h]	ch [χ]	bh [v]	dh [ɣ]	gh [ɣ]	mh [v]	fh [Ø]	sh [h]	sh [h χ´]
b.	bp [b]	dt [d]	gc [g]	mb [m]	nd [n]	ng [ŋ]		bhf [v]		

2.3. Alternations

Long or diphthongised vowels may alternate with short vowels, e.g.

(2) i: ~ i [kʹiːlʹ] / [kʹilʹə] cill / cille 'churchyard / gen.sg.'
au ~ i [klaun] / [klinʹə] clann / clainne 'children / gen.'

A change in the quality of the following consonant may also affect the preceding vowel, e.g.

(3) u ~ i [muk] / [mikʹ] muc / muic 'pig / dat.'
o ~ i [sop] / [sipʹ] sop / soip 'wisp / gen.sg.'
a ~ i [fʹar] / [fʹirʹ] fear / fir 'man / gen.sg.'

Vowels from the last syllable of a polysyllabic word alternate with zero, whenever the word is lengthened by an inflection beginning with a vowel, e.g.

(4) ə ~ Ø [dorəs] / [doːrʃə] doras / doirse 'door / pl.'

Palatalised consonants alternate with non-palatalised ones, e.g.

(5) k ~ kʹ [mɑk] / [mikʹ] mac / mic 'son / gen.sg.'
χ ~ gʹ [ʃionəχ] / [ʃinigʹ] sionnach / sionnaigh 'fox / gen.sg.'

2.4. Stress

The rules of stress assignment are fairly complex and exception-ridden (see Doyle and Gussmann 1997: 26, Gussmann 1997, Ó Sé 2000: 46-55). Their explication lies far beyond the scope of this work. Suffice it to say that the primary stress falls mainly on the first syllable, in which case it will not be marked. Whenever it falls on the second or following syllable the symbol ['] is placed before the stressed syllable.

3. Verbal Nouns – Introduction

The verbal noun (*ainm briathartha*) – VN for short – is one of the most complex categories of Irish grammar. It has been described as 'halfway between being nominal and belonging to the inflectional system of the verb' (Ó Siadhail 1989: 195), or as Stenson (1976: 23) puts it 'in form and behaviour, the verbal noun seems to occupy a mid-position on a hierarchy between noun and verb'. Such

accounts are by no means satisfactory. It is one of the most basic theoretical principles of modern linguistics that lexemes are restricted to what Chomsky (1965) terms major lexical categories, i.e. noun, verb, adjective and adverb. A major class item may be a noun, verb or adjective but it can never denote a noun and verb simultaneously. Either we have to do with homonyms, e.g. *hair, hare*, or a derivational relation, e.g. *to kick → a kick*, or *a frame → to frame*.

This confusion stems from the fact that the VN is used in all contexts where English uses a participle, infinitive or a deverbal noun. The same phonological word may play the role of a non-finite form and a nominalisation. The form *ól* is the VN of the verb *ól* 'drink'.

(6)

a.　*Caithfidh mé beoir a　ól.*　　　　　　　Infinitive
　　　must　　　I　beer　PRT drink-VN
　　　'I have to drink beer.'

　　　Táim tar éis beoir a　ól.　　　　　　　Participle
　　　I-am　after　beer　PRT drink-VN
　　　'I have drunk some beer.'

　　　Táim ag　ól　　beorach.　　　　　　Progressive Verbal Aspect
　　　I-am　PRT drink-VN beer
　　　'I am drinking beer.'

b.　*Stad　den　ól.*　　　　　　　　　Actional Nominalisation
　　　stop from-the drink-VN
　　　'Stop drinking.'

　　　Is milis an　t-ól　　é.　　　　　　Concrete Nominalisation
　　　is sweet　the drink-VN it
　　　'It is a sweet drink.'

VNs in (6a) discharge the function of non-finite verb forms, hence they are an inflectional category. In (6b) they mark lexical derivational categories. Morphological irregularity only adds to the complexity of the problem. The process of VN formation is exception-ridden and it involves about 20 morphophonological exponents. This is as if English nominalisations in *-(at)ion*, *-ment*, *-al*, *-ure* etc. additionally featured in non-finite contexts.

When presenting the distribution of affixes, traditional grammars follow the division of verbs into two conjugations. First conjugation verbs consist of

monosyllabic verbs which end in a consonant, e.g. *mol* 'praise', *bris* 'break', monosyllabic verbs which end in *-igh*, e.g. *nigh* 'wash', *crúigh* 'milk', and verbs which end in *-áil*, e.g. *pacáil* 'pack'. Second conjugation verbs are disyllabic and end in *-(a)igh*, e.g. *ceannaigh* 'buy', *éirigh* 'rise' for the most part; a small number end in other consonants, e.g. *oscail* 'open'.

FIRST CONJUGATION

(7)	Exponent	Verb	Verbal Noun
a.	-(e)adh [ə]	bris 'break' mol 'praise'	briseadh moladh
b.	-adh [ə ⁻ᴾ]	buail 'hit'	bualadh
c.	Ø	pacáil 'pack' díol 'sell'	pacáil díol
d.	Ø⁻ᴾ	siúil 'walk'	siúl
e.	-t [t´]	bain 'cut'	baint
f.	-(e)amh [əv]	caith 'spend' seas 'stand'	caitheamh seasamh
g.	-(e)an [ən]	lig 'let'	ligean
h.	-chan [χən]	beoigh 'animate'	beochan
i.	-úint [uːn´t´]	creid 'believe'	creidiúint
j.	long vowel	crúigh 'milk' nigh 'wash'	crú ní
k.	-áil [ɑːl´]	tóg 'build'	tógáil
l.	-e [ə]	rinc 'dance'	rince
m.	-int [ən´t´]	féach 'look'	féachaint
n.	-acht [əχt]	fan 'wait'	fanacht
o.	-achtáil [əχdɑːl´]	mair 'live'	maireachtáil
p.	-im [əm´]	tit 'fall'	titim

SECOND CONJUGATION

(8)	Exponent	Verb	Verbal Noun
a.	-(i)ú [uː]	scrúdaigh 'examine' bailigh 'collect'	scrúdú bailiú
b.	-t [tʹ]	cosain 'defend'	cosaint
c.	-(a)í [iː]	corraigh 'move' éirigh 'rise'	corraí éirí
d.	Ø	foghlaim 'learn'	foghlaim
e.	Ø -P	freastail 'attend'	freastal
f.	-(e)amh [əv]	smaoinigh 'think'	smaoineamh
g.	-ach [əχ]	ceannaigh 'buy'	ceannach
h.	-acht [əχt]	imigh 'go'	imeacht
i.	-áil [ɑːlʹ]	coinnigh 'keep'	coinneáil

Previous research on VNs (de Bhaldraithe 1953, Ó Siadhail 1989, Ó hAnluain 1999, Ó Sé 2000) is dominated by the form and distribution of individual affixes, to the detriment of the functional aspect. The functional analyses available give prominence to the verbal uses of the VN and play down its nominal functions. Traditional grammarians, who view morphology as mere concatenation of morphemes, argue for listing VNs in the lexicon and treating them as part of the inflectional system of the verb. The form should be listed in the dictionary and must be learned as one of the principal parts of the verb. Ó Siadhail (1989: 195) characterises VNs as follows: 'in many ways their function and formation are similar to ordinary nouns (…) Yet, despite all the similarities, since almost every verb has an associated VN, it must be dealt with as part of the inflectional system of the verb'.

In sum, linguists who address the subject of VNs note both their nominal and verbal uses but feel obliged to make a definitive statement of their category. They opt for inflectional forms of verbs, whose formation is basically irregular. We feel that an investigation which eschews biuniqueness, i.e. a one-to-one relationship between sound and category/meaning, holds more promise.

The discussion of the categorial status of VNs and the intricacies of their formation is preceded by a brief examination of the English suffix *-ing*. *-ing* suffixed forms could be regarded as the English counterparts of Irish VNs

because they may stand for both non-finite verb forms, i.e. participles, and products of derivation, i.e. nominalisations. An understanding of the various functions of this suffix will help us to decide on a morphological framework, and hence to carry out our analysis.

4. The English suffix -ing

Before we turn to the exposition of various categories realised by means of the suffix *-ing* a word of explanation seems in order.

Firstly, methodological doubts may arise as to what extent knowledge of a specific category in one language can contribute to the understanding of a similar category in another. Payne (1997: 37) observes '(…) the term 'participle' is found in many grammar descriptions. Nevertheless, what constitutes a participle in language A may not have any commonality with what is called a participle in language B'. It is not our intention to extrapolate from English facts. They are merely to serve as a convenient point of reference for those who are not familiar with the Irish material. The comparison is made on grounds of similar morphosyntactic categories and analytical problems involved. It helps to put the complexity of the Irish system in perspective.

Secondly, the literature on the English suffix in question is abundant and a full review of this topic would go far beyond the bounds of this book. We should bear in mind that the fragmentary discussion that follows is geared towards preparing the ground for the Irish material.

4.1. Introduction

The traditional view of categorisation has been undermined by certain findings in the field of generative semantics (Lakoff 1972, Ross 1973, McCawley 1982) and cognitive psychology (Rosch 1973, 1977, Rosch and Mervis 1975, 1976). It has transpired that boundaries between categories may not be clear-cut and particular elements may claim membership of two or more different categories. Class membership does not rest upon the binary principle but is a matter of degree. Word classes are no exception and within a given category we may distinguish core and peripheral elements.

For instance a prototypical noun in English is conceived of as having singular, plural and genitive forms. It can be preceded by the definite or indefinite article and typically has concrete referents. Nevertheless, uncountable and proper nouns are regarded as nouns because they share some of the defining properties of the category in question.

The exact classification of verbal forms is also fraught with difficulty. Prototypical members of this category function as the primary relational focus of the clause, display the fullest morphological marking for person, number, tense, aspect and modality, and are considered finite. We are on thin ice, however, when we turn to non-finite verbal forms, typically devoid of person and number marking. These forms feature in various functions which are not considered prototypical. For instance, verbal participles can be used in adjectival functions modifying nouns. The gerund and the infinitive are classified by Bybee (2000: 799) as belonging to the general category of verbal nouns 'since they bestow on the verb to a greater or lesser extent the properties associated with nominals allowing the verbs to be used in non-canonical functions'.

In sum: in our efforts to create neat classification systems, we will always encounter borderline cases. There will always be elements of unclear status, whose class membership is often resolved by an arbitrary decision depending on which of the morphological, syntactic or semantic criteria are given prominence.

In this section we are going to examine words ending in *-ing* in English, which can serve us as an illustrative example of such recalcitrant elements. This ending is particularly ambiguous as it cuts right across category distinctions. It may mark nouns, verbs and adjectives, and it is not always clear which of the three we are actually dealing with. According to Jespersen (1954) the *-ing* form is a cover term for those forms in English which syntactically must be regarded as two different entities, a gerund and a participle. Quirk *et al.* (1985: 1290-1292) stress the need to recognise a complex gradience from deverbal nouns via verbal nouns to participles. Also Biber *et al.* (1999: 66-68) discuss this particular suffix and offer some criteria for making distinctions. In this section, we attempt to classify *-ing* formations according to their syntactic behaviour. We start by investigating contexts in which, we feel, the verbal base has undergone category shift, i.e. the nominal and adjectival uses of *-ing* suffixed forms. Then we proceed to syntactic configurations where *-ing* suffixed forms can be considered to be non-finite elements, i.e. products of inflectional processes which leave the category of the base intact. More fine-grained distinctions within the latter category are made on the basis of semantic restrictions on productivity. We conclude by presenting the theoretical ramifications of our discussion. The examples cited have been taken from the three sources above, the *Collins Cobuild English Dictionary* (the CCED), Malicka-Kleparska (1988) and Cetnarowska (1993).

4.2. Derivational categories: nouns and adjectives

In this section we bring into focus *-ing* forms which discharge the function of nouns. A contrast between actional (predicative, verbal) and non-actional (concrete, nominal) readings can be observed in most studies on nominalisations. In what follows we shall present the similarities and differences between the two types. We shall also challenge the traditional view on nominalisations according to which there is only one derivational rule with well-behaved semantics and which views concrete meanings as the offshoot of lexicalisation (Bauer 1983, Malicka-Kleparska 1988, Szymanek 1989). We shall put forward a tentative proposal that they may conceivably be a product of two distinct lexical rules. We also examine in this section so-called subjective (active) adjectives, about which we will have far less to say, as they are not as relevant to our discussion as nouns.

4.2.1. Actional and concrete nominalisations – similarities

We are dealing with a noun when the form in question fills the slot of the head of an NP, i.e. it is modified by typically nominal modifiers.[1] Firstly, when it is preceded by a determiner or adjective:

(9)   *some enthusiastic bidding from Bloomfields*
       an evening of heavy drinking

Secondly, when it is followed by an *of*-phrase:

(10)   *the banning of some chemicals*
        the annual gathering of the South Pacific Forum

Thirdly, when it is followed by a relative clause:

(11)   *her dancing, which was bad beyond measure*
       her endless nagging, which drove him away from home

The noun status is particularly obvious when the *-ing* form takes the plural or is capable of designating concrete objects, e.g. *building(s)*.

   'Concrete' readings envisage the existence of some material referents, 'something material connected with the verbal idea (agent, instrument, belongings, place or the like)' as Marchand (1969: 303) puts it. Concrete

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[1] The examples cited below come from Biber *et al.* (1999: 67) and the CCED.

nominalisations frequently denote what results from the action of the base, e.g. *building*, *opening*, *drawing*. The results may also be immaterial, e.g. *blessing*, *warning*. According to Quirk *et al.* (1985: 1290-1291) in:

(12)   *some paintings of Brown's*
        Brown's paintings of his daughter

the *-ing* forms are undoubtedly related to the verb by means of word formation, because they have a non-actional meaning and could be replaced by underived nouns such as 'pictures' or 'photos'. Apart from prototypically nominal characteristics, concrete nominalisations may also exhibit some idiosyncrasies. Some forms may be confined to the plural only, e.g. *earnings*, *savings*, *shavings*, *deservings*. There are also occasional non-count formations such as *stuffing*, *clothing*, and abstract count items which refer to the occasion of the base verb's activity, e.g. *christening*, *wedding*. The erratic behaviour of concrete *-ing* forms is attributed to their secondary nature with respect to actional nominalisations.

The semantic contents of nominalisations in their actional readings is almost equivalent to the semantic information conveyed by the corresponding verbs, and can be paraphrased as 'act(ion) of V-ing' or 'process of V-ing'. Consider the following examples from the CCED:

(13)   *...developing fitness through exercise and training ...*
        Has your spending on food increased?
        ...young people who find reading and writing difficult...
        ...efforts to curb the laundering of drug money...
        America sent cotton to England for processing.

They can usually be replaced in sentences by appropriate verbal expressions, verb phrases or clauses. According to some authors (cf. Malicka-Kleparska 1988: 28, Cetnarowska 1993: 20) subtle differences in meaning can be put down to the syntactic and situational context in which the nominalisation occurs. Verbal nouns, as they are termed by Quirk *et al.* (1985: 1291), can be preceded by the definite article or an adjective premodifier, and can be followed by the genitive construction, as illustrated in (14):

(14)   *The painting of Brown is as skilful as that of ...*
        Brown's deft painting of his daughter is a pleasure to watch.

The *-ing* forms in the sentences above could be replaced by an abstract noun like 'representation' or 'depiction', or by a paraphrase retaining the actional

meaning. In this they differ from the examples in (12). The verbal nouns can be formed from verbs by adding *-ing* to the verb and inserting *of* before the NP which corresponds to the object in the corresponding sentence, or to the subject if the object is not expressed, e.g.

(15)   *their polishing of furniture – They polish furniture (O)*
        the writing of Smith – Smith (S) writes sth

The derivational character of both kinds of nominalisations manifests itself in the variety of formatives involved and the unpredictability of their distribution. Both actional and concrete nominalisations have identical formal markers other than *-ing*, e.g. *-ment*, *-ation*, *-ance/-ence*, *-al* or zero-derived forms[2]: *amendment, organisation, hindrance, arrival* and *repair*.

4.2.2. Actional and concrete nominalisations – differences
Having discussed the similarities between actional and concrete nominalisations, we will now turn to the differences. Forms characterised by other exponents can be replaced by corresponding *-ing* variants in regular, i.e. actional readings but not in their concrete meaning. Malicka-Kleparska (1988: 165) notes that in the actional sense both *civilizing* and *civilization* can be used (16a). *Civilization* as a lexicalised, concrete nominalisation does not have an *-ing* counterpart (16b).

(16)
a.   *...to attempt the civilization of the Australian aborigines* vs.
        the civilizing of the Highlands of Scotland ...
b.   *the ancient civilizations / *civilizings*

The same applies to, for example, *equipment:*

(17)
a.   *the equipping of two such armaments* vs.
        for the endowment and equipment of a chair of Anatomy
b.   *the helmet is ...the brightest ...part of the soldier's equipment /*
        **equipping*

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[2] We regard zero derivatives on a par with the suffixed formations. It is legitimate to postulate a zero morpheme, i.e. a morphological process without an overt phonological reflex, when it contrasts with a set of exponents used to mark the same function (cf. Marchand 1969, Beard 1984).

Cetnarowska (1993: 112-117) observes that *-ing* suffixed forms do not block zero-derivatives but that they do affect their meaning, i.e. *-ing* tends to be related to all senses of the verb, whereas a zero-derivative is restricted to one or two meanings. Compare *drawing* with *draw*. In the actional reading the latter is restricted to 'the act of receiving or taking by chance cards, lots etc.' The occurrence of bare nominalisations in the actional reading is blocked by other suffixed forms, which means that these are normally two competitive means of morphophonological marking, e.g. *reserve* receives no actional interpretation due to the existence of *reservation*. Surprisingly, no such blocking effect is observed in the concrete reading, where the bare nominalisation differs in its denotation or connotation from the suffixed form. Compare *reserve* 'something reserved for future use, troops withheld from action, a place reserved for special use, self-restraint' with *reservation* 'the power of absolution, a booking of a room in a hotel'. We get both *a nature reserve* which is meant to protect animals/plants and *a reservation* which denotes a piece of land allotted to American Indians.

We can present the different kinds of nominalisations and the relationships between them in the form of a table:

(18)

Verb Base	Nominalisation		
	Actional -ing	**Actional – other exponent**	**Concrete**
civilize	civilizing	civilization	civilization
equip	equipping	equipment	equipment
disturb	disturbing	disturbance	disturbance
refuse	refusing	refusal	refusal
build	building	*	building
wait	waiting	*	wait
blend	blending	*	blend
draw	drawing	draw	drawing, draw
reserve	reserving	reservation	reservation, reserve

4.2.3. Nominalisations – a product of one or two WFRs?

In her analysis of actional suffixed nominalisations Malicka-Kleparska (1988: 164) claims that *-ing* is a truly productive suffix, which forms a separate block and all others can only be described by redundancy statements. This stand will

not be put into question here. As nominalisations terminating in *-ment*, *-ation*, *-ance/-ence*, *-al* are products of dormant rules, they are listed in the Permanent Lexicon[3] and enter into complex interactions with products of genuinely productive processes.[4] Cetnarowska (1993: 128) regards zero derivation of nominals as co-functional with suffixation and ordered as the last process of the block. As no blocking effect is observed between zero derivatives and *-ing* action nouns the former is not ordered with respect to the latter. In what follows, we shall pinpoint certain problems stemming from this position.

On an alternative analysis, which has been signalled in Beard (1995), process and result nominalisations are derived by distinct lexical rules, which differentiates nominalisations in terms of their capacity for expressing number.[5]

Firstly, there is *-ing* suffixation, which produces uncountable nominalisations. This process is characterised by high productivity as the only verbs to which it does not apply include modal verbs, stative verbs denoting relations, verbs of emotion and cognition and phrasal verbs (Malicka-Kleparska 1988: 103).

The second productive way of forming de-verbal nominalisations is zero derivation whose primary function is to form count nominals. As far as productivity is concerned, Cetnarowska (1993: 132) concludes 'since the rule of verb-to-noun conversion (…) is highly productive and carries no negative conditions, the Conditional Lexicon will most probably list action nouns with no overt suffix from all types of verbs in English. The Permanent Lexicon, in contrast, will contain entries for institutionalised bare nominalisations only.' The

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[3] There is good evidence that the distinction between the Conditional and Permanent Lexicon is theoretically useful and psycholinguistically valid (cf. Allen 1978, Malicka-Kleparska 1985, 1987, Aronoff 2000). The Permanent Lexicon is a list close to the traditional notion of the lexicon in that it contains all idiosyncratic items, which are either morphologically simplex or complex. An item can be classified as idiosyncratic only by virtue of its frequent usage. The Conditional Lexicon contains all possible words produced by regular processes.

[4] The actual appearance of complex forms produced by word grammar is to a great extent governed by the mechanism of blocking. The definition of blocking understood as the non-existence of a complex form due to the existence of a synonymous competing form (*stealer* vs. *thief*) put forward by Aronoff (1976) has been refined and now takes into account not only synonymy but also productivity and frequency (cf. Rainer 1988).

[5] Beard's arguments, which seriously undermine the idea that number in nouns is syntactically determined, are presented in section 5.5.2. below. Hence in what follows number is regarded as a morpholexical feature which can be exploited in derivation.

grammatical specification of a given type of nominalisation has ramifications both for its syntactic behaviour[6] and semantic reading.

   With regard to semantics, *-ing* nominalisations are interpreted as 'action or process of V-ing', whereas the Nomen Acti reading, i.e. 'a single instance of V-ing' is prevalent in zero derivatives (cf. Cetnarowska 1993: 112-113 and Adams 2001: 28-29). We do not challenge the view that the meaning of action nouns, regardless of the derivational type they belong to, is subject to semantic extension. De-verbal nominals undergo concretisation which may yield names of material or immaterial results, names of affected objects, causers, instruments, locations.

   Our observations concerning productive WFRs which yield de-verbal nominalisations are summarised graphically below:

(19)

<div align="center">

VERB

Uncountable Nominalisation   Countable Nominalisation
-ing   Ø
'process of V-ing'   'single instance of V-ing'
+ extensions   + extensions

</div>
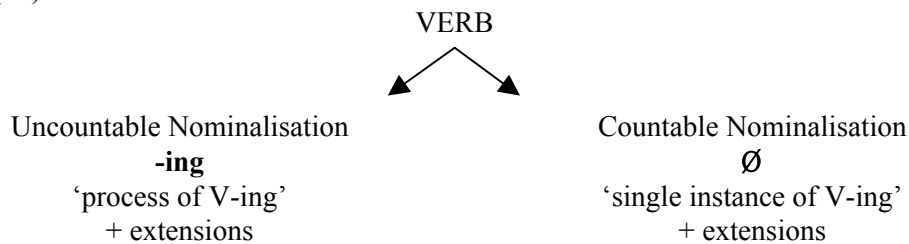
We shall put forward three arguments in support of this view. They relate to cognitive processing, the operation of blocking and cross-linguistic plausibility.

   First of all, our idea is corroborated by findings in cognitive linguistics, where it is assumed that when we wish to conceptualise a process as a thing we may view it in its entirety either as something bounded (with a beginning and end) which may be repeated (pluralised), e.g. *jump*, or as something unbounded (an action in itself) which is non-replicable, e.g. *jumping*. Finally, we may focus on the products of processes, e.g. *a buy* or *a drink*. Langacker (1987) establishes parallels between perfectives and count nouns on the one hand and imperfective processes and mass nouns on the other.[7] Szymanek (1988: 93) expounds the

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[6] Since the differences in inheritance of predicate-argument structures are laid out in considerable detail in Cetnarowska (1993: 69-85), they will not be elaborated here.
[7] This idea has been taken up by Beard (1995: 199), who considers the following nominalisations:

a.	*a statement*	b.	*the stating (of the fact by the mayor)*
	a walk		*(John's) walking (through town)*
	a swing		*the swinging (of the bat by the player)*

Cognitive Grounding Condition, which says that 'the basic set of lexical derivational categories is rooted in the fundamental concepts of cognition' and is considered 'the principal diagnostic in a categorisation procedure' (Szymanek 1988: 119). This means that the generalised meaning of a derivational category must embrace fundamental concepts of cognition. Even though the appendix contains only one category of Nomina Actionis related to the verbal prototype, ACTION as well as to the nominal prototype, OBJECT[8], SUBSTANCE and NUMBER are enumerated among the fundamental concepts of cognition. These two, in turn, could be employed to account for the different nominalisation types that we advocate.

Secondly, it is possible to accommodate into our proposal other suffixed nominalisations and demonstrate that our analysis outstrips the classic approach as far as blocking phenomena are concerned.

Quirk *et al.* (1985: 1551) suggest that there is an aspectual contrast between the nominalisations in *-ation*, *-ment etc.* and the *-ing* verbal noun, with the former referring to actions in their entirety, including their completion. This is tantamount to saying that *-ing* nominalisations are uncountable whereas the suffixed forms are countable.

(20)   *His exploration of the mountain took/will take three weeks.*
         His exploring of the mountain is taking a long time.

Malicka-Kleparska (1988: 30) refutes this argument by demonstrating that the difference is due exclusively to the context, and provides examples of non-*ing* nominalisations which do not imply completion. This, in turn, shows that suffixed nominalisations can also function as uncountable nominals with process meaning.

(21)   *The punishment of the boy is taking a long time.*
         The organization of the party is taking a long time.
         The placement of the stone is taking a long time.

Both Quirk *et al.* and Malicka-Kleparska are right up to a point. The confusion arises from the fact that suffixed forms have both actional and

The actions expressed by the nominals in (a) refer to countable instances of that action. They are similar in meaning to the perfective aspect, as in *has stated*. The meaning of the nominalisations in (b) is close to that expressed by the imperfective, *is stating*, *has been stating*.

[8] However, Szymanek (1988: 177) makes a reservation that his list of categories 'is by no means complete or exhaustive'.

concrete or anti-durative senses. In the former meaning they are non-count nouns with an actional reading, and correspond to imperfective processes. In the sentences provided by Malicka-Kleparska they could never be interpreted as concrete entities. The actional meaning always goes hand in hand with the uncountable nouns, whereas the concrete reading requires a countable noun. Consider the following examples from the CCED:

(22)

punishment	
N-uncount.	'the act of punishing someone or being punished'
	...a group which campaigns against the physical punishment of children
N-variable	'a particular way of punishing somebody'
	The government is proposing tougher punishments for officials convicted of corruption.
organization	
N-uncount.	'making the necessary arrangements'
	...the exceptional attention to detail that goes into the organization of this event...
N-count.	'an official group of people, for example a political party, a business'
	...schools are provided by voluntary organizations...
placement	
N-uncount.	'the act of putting in a particular place or position; act or process of finding a job, home, school'
	The treatment involves the placement of twenty two electrodes in the inner ear.
	The children were waiting for placement in a foster care home.
N-count.	'a job for a period of time to give experience; home for someone who is unable to look after oneself'
	He spent a year studying Japanese in Tokyo, followed by a six month placement with the Japanese government.
	This home seemed like a good placement for Sarah.
exploration	
N-uncount.	'exploring'
	...the exploration of the ocean depths...
N-count.	'an instance of this, expedition'
	...conduct an exploration into the interior of the continent ...

To round up our discussion up to this point: suffixed nominalisations reside in the Permanent Lexicon either as uncountable nominalisations only, e.g. *condensation, corrosion, disposal* or, more frequently, as in the examples above, have two homophonous entries, e.g. *landing, building, quotation, distraction, exhibition, establishment, embarrassment, inheritance, annoyance, passage, drainage.* The first two examples show that *-ing* formations which lack suffixed opposite numbers are listed in the Permanent Lexicon. Interestingly, listed *-ing* formations provide additional evidence for the existence of two rather than one nominalisation process. Malicka-Kleparska assumes that concrete nominalisations which terminate in *-ing*, *-ation*, *-al* and *-ance* are not derived productively by WFRs, but are products of lexicalisation phenomena that affect corresponding actional nominalisations on account of their formal identity and due to the fact that the regular nominalisations are greater in number and concrete ones appear only with a small fraction of regular derivatives. However, there is one serious piece of counterevidence against this claim, which Malicka-Kleparska (1988: 95) recognises. Namely, 'we find concrete (countable) nominalisations derived from stative verbs but no regular nominalisations derived from them'. She quotes the following examples from the OED:

(23)   *...all my belongings*
       He got a glass from Mr. Reed and another tasting (= helping)
       A fair ending crowned a troublesome day.
       An Englishman's natural clingings to a long and unbroken political past.
       a few years of confident hopings and undeserved trustings

She notes that 'such irregular (or countable, though not concrete) nominalisations (…) do constitute a grave counterexample. (…) The problem is that the regular *-ings* from stative verbs actually sound "wrong", as Lees (1960: 66) points out.' She quotes some regular stative nominalisations from the OED, which she admits 'sound awkward, obsolete, poetical or archaic'. Diachronic evidence provides even more regular *-ing* nominalisations from stative verbs. Malicka-Kleparska (1988: 98) says that 'lexicalised, well-established forms such as *a being, a feeling, a longing* have been retained, while the regular, rule derived forms are **no longer felt to be fully grammatical**'[emphasis mine M.B.-T.]. According to her 'this state of affairs supports our [i.e. her] analysis as it supplies some additional evidence for the distinction between rule derived and lexicalised forms and their position in the system of the language'. The point is that speakers' competence cannot be likened to the contents of the OED. Synchronically, it is possible to form concrete nominalisations from stative

verbs, but it is not possible to do so in the case of regular ones and this restriction is reflected by listed *-ing* formations.

In the preceding section we noted that the mechanism of blocking does not treat suffixed and zero derived nominalisations right across the board, which should be the case if they are regarded as co-functional. Let us see how the problems we encountered can be surmounted .

Forms characterised by other exponents can be replaced by corresponding *-ing* variants in regular, i.e. actional readings but not in their concrete meaning (cf. (16) and (17) above). This situation poses a problem for the mechanism of blocking, which is supposed to operate on lexical items rather than on different senses of lexical items. The application of blocking depends on the tug-of-war between word storage and word processing mechanisms. The new formation can be blocked if it is synonymous with an already existing complex form and must be the result of a productive WFR. The blocking item, in turn, must be sufficiently frequent with respect to a synonymous derivative (cf. Rainer 1988, van Marle 1986). The condition of frequency seems to be decisive in this case. The suffixed nominalisations are far more tenacious in the lexicalised sense, however, they lag behind *-ing* in terms of frequency in the regular actional sense. We get a clearer picture once we recognise homophonous lexical items, which result from different lexical processes such as

(24)

Verb	N-Uncount. (actional)		N-Count. (actional or concrete)	
civilize	*?civilizing*	*civilization*	**civilizing*	*civilization*

The high productivity and frequency of *-ing* formations renders *civilizing* a potential form in the actional sense despite the fact that the relevant slot in the Permanent Lexicon is already occupied by *civilization*. There is no question of blocking in the concrete sense as the meanings and grammatical specification are different due to the operation of a distinct WFR. Let us now turn to zero derivatives.

If zero derivation is co-functional with suffixation it should be possible for *-ing* forms to replace the zero derived nominalisations in the actional reading as in the case of *civilization*. This does not happen thereby posing a problem for the traditional view. The problem is resolved once we regard suffixed and zero-derived nominalisations as products of different lexical rules. Then semantic readings are governed by the grammatical specification of distinct derivatives and countable zero-derivatives receive the Nomen Acti reading (Cetnarowska 1993: 112) as depicted in the examples below.

(25)

Verb	N-Uncount. (actional)	N-Count. (actional or concrete)
beat	*beating*	*beat*
transfer	*transferring*	*transfer*
draw	*drawing*	*draw*

Some bare nominalisations lack institutionalised concrete readings and can only denote Nomina Acti, e.g. *collapse*, *cuddle*, *hug*, *nod*, *save*. Such nominalisations (invariably singular and indefinite) are restricted to constructions with semantically light verbs, e.g. *have a think*, *take a look*, *give a smile, make a throw* (cf. Adams 2001: 29).

The situation is more complex where in addition to the bare nominal there is a suffixed nominalisation based on the same verbal base. According to Cetnarowska the occurrence of bare nominalisations in the actional reading is blocked by other suffixed forms but no such blocking effect is observed in the concrete reading (cf. *reservation* vs. *reserve* above). The trouble with this interpretation is that again only half of the lexical entry is blocked rather than an entire lexical item.

On our analysis, there are two entries for *reservation* in the Permanent Lexicon. In the process reading it could potentially be replaced by an *-ing* form, in which sense *reserve* is out of the question. There is a count noun *reservation* which may be actional or concrete. *Reserve* in the actional sense is potentially derivable but hardly used due to the tenacity of the suffixed form, and gives rise instead to other concrete senses.

(26)

N-Uncount. (actional)	N-Count. (actional)	N-Count. (concrete)
?reserving reservation	*reservation*	*reservation*
*reserve	*?reserve*	*reserve*

Cetnarowska (1993: 114) claims that zero derivatives belonging to the group with suffixed counterparts, e.g. *deposit*, *exhibit*, *guide*, *pay* require a non-actional interpretation, but at the same time she contradicts herself by adding that in the OED they are also glossed as 'an act of V-ing', hence the action reading is rare but potential. Furthermore, 'the majority of zero-derived nouns felt as nonce-formations occur only in the Nomen Acti sense 'an act or occasion of V-ing' e.g. *commute*, *interrupt*, *invest*' (Cetnarowska 1993: 119). This bears out our hypothesis.

If we postulate two separate categories and claim that this distinction has origins in human cognition (hence is universal), it should be cross-linguistically

valid. In Polish the derivation of action nominalisations is not monolithic in terms of their semantics and productivity, which leads to the distinction between *substantiva verbalia* and *substantiva deverbalia* (Puzynina 1969, Grzegorczykowa 1972: 31).

(27)

Substantiva verbalia	**Substantiva deverbalia**
bieganie 'running'	*bieg* 'run'
zarządzanie 'managing'	*zarząd* 'management'
rozbieranie 'taking to pieces'	*rozbiórka* 'dismantling, demolition'

A cursory look at nominals in German also holds promise. The highly productive conversion of infinitives produces uncountable process nominals whereas nominalisations characterised by other exponents (-*ung*, ommisively marked derivatives, -*e*, -*ation*) are capable of pluralising (cf. Fleischer & Barz 1992: 172-177, 211-213).

(28)

Nominalised infinitives	**Nominalisations with other exponents**
das Schreien (Kontinuum)	*der Schrei (pluralfähig)*
'quarrelling (continuum)'	'quarrel (capable of pluralising)'
das Verstecken (Prozess)	*das Versteck*
'hiding (process)'	'a hiding place'

When we compare *während der Schwankung der Stromspannung* and *während des Schwankens der Stromspannung* 'during the oscillation of electricity' the only difference is that in the former the nominalisation can be pluralised, i.e. the form *Schwankungen* is available. The data from Polish and German do not dispel our analysis and open up new promising vistas for further research.

To sum up: in synchronic terms verbs serve as bases for two almost categorial processes deriving nominalisations. The differences between actional and concrete/anti-durative readings can be reduced to the derivative's capacity to express number. The distinction is not only cognitively grounded and cross-linguistically plausible but is also reflected in the operation of the mechanism of blocking.

4.2.4. The active adjective
Szymanek (1989: 125) argues that there are no transpositional processes whose sole function is to shift verbs to the category of adjectives. He dismisses the possibility of deriving adjectives from participles on the grounds that 'there are

no overt morphological markers of the process involved and, besides, the two forms are not strictly equivalent semantically'. Szymanek's initial reservations are not shared by other linguists, e.g. Borer (1990) and Beard (1995), who regard active adjectives as distinct from participles and at the same time as derived from verbal bases. Beard (1995: 196, 321) points out that the form of the active adjective, also referred to as the subjective/agentive qualitative adjective, and that of the active participle do not always coincide, and that there are marked morphological and syntactic differences between them. Some of these discrepancies are displayed in the table below:

(29)

Affixes	Active Adjective	Active Participle
Same	is (very/un)surpris-ing	(not) surpris-ing (very much)
	is (very/un)excit-ing	(not) excit-ing (very much)
	is (very/un)mov-ing	(not) mov-ing (very much)
Distinct	is (very/un)product-ive	(not) produc-ing (very much)
	is (very/un)repent-ant	(not) repent-ing (very much)
	is (very/un)compliment-ary	(not) compliment-ing (very much)

The suffix *-ing* is the only marker of the syntactically formed participle, whereas the lexically derived adjective is marked by additional formatives, which attach to some Latinate roots. We are dealing with an adjective when the form in question begins with the prefix *un-*. For example, *unyielding* should be analysed as the prefixed adjective *un-* + *yielding*, as there is no verb of the form **unyield*. Participles, on the other hand, can only be made negative by the addition of *not*. An *-ing* form is an adjective if it can be turned into an adverb by the addition of *-ly*, e.g. *surprisingly, appallingly*. Only the adjective can form the comparative. Only adjectives can be preceded by a degree adverb such as *very, so, too*. These intensifiers are incompatible with participles which require *very much* or *a lot*. Naturally, active adjectives (unlike participles) are not confined to the predicative position. They can also feature attributively as in:

(30) *a (very/un)surprising result*
  a (very/un)moving story

Biber *et al.* (1999: 68-69) also note that if the *-ing* form is followed by a verb complement (such as an object) it is clearly a verb, e.g. *is eating lunch*. Adjective status is indicated by the impossibility of using the non-progressive form of the verb (*X is promising* – **X promises*) unless a complement is added

(*X promises a great deal*). If we are dealing with the verb, the *-ing* form will have a progressive (dynamic) meaning as in: *his voice was irritating me*, while if it is an adjective its meaning will be stative, e.g. *His voice was (very) irritating.* If we are dealing with an adjective we may substitute *seem* for the copula verb *be*: *it seems surprising* vs. **She seems working hard.*

A careful reader may already have noticed that the criteria for adjective status do not apply to the *-ing* forms across the board. We will get contradictory results if we apply the criteria postulated above to adjectives of the type *amazing*, *annoying* on the one hand, and to adjectives similar to *jumping*, *flying* on the other. This problem is addressed by Borer (1990: 95-103). The fact that active adjectives derived from action verbs cannot be modified by *very*, *so*, *too* as in **a very flying cow* or **this spacecraft is so/too flying*, coupled with their deviant behaviour with respect to *-ly* and *un-* affixation, has led some linguists to postulate the constraint that the bases for *-ing* adjectives are restricted to verbs which contain Experiencer in their thematic grids. We shall not delve too deeply into Borer's argument. Suffice it to say that she brings the adjectives derived from action verbs into line with the prototypical members of the category active adjective, by claiming that the range of expressions modifying adjectives corresponds to certain modification restrictions on the verbs from which they are derived. In other words, this problem has nothing to do with the question of their categorial status, i.e. whether they are adjectives or verbs.

Summing up, we will continue to maintain the distinction between the two kinds of *-ing* formations.

4.3. Inflectional categories: non-finite verb forms

We now turn to inflectional categories which are realised by the suffix *-ing*. There is a lot of confusion and inconsistency in general in linguistics in the use of terms such as the gerund, participle or verbal noun. Therefore, it seems worthwhile to get our bearings before we proceed.

Participle is a term originally applied to adjectival forms of verbs in ancient Greek. Matthews (1997: 267) notes that they were regarded as a 'sharing' element (Greek *metokhē*) because they shared certain characteristics of verbs and nouns, i.e. they combined inflection for tense and aspect with inflection for case. Trask (1993: 200) also defines the participle as a non-finite verb form functioning as an adjectival or adverbial modifier. This label is often extended to verb forms which combine with auxiliaries to form periphrastic constructions. By and large, participles are distinguished from gerunds. Gerund was a term originally used to designate nominal forms of verbs in Latin (Matthews 1997:

145). Verb forms with a noun-like role are also sometimes referred to in the literature as participles (hence the confusion) and verbal nouns.

   We will start with non-finite verb forms which display certain nominal features, and then we will investigate bona fide participles (adjectival forms of verbs).

4.3.1. The gerund

Various linguists (e.g. Schachter 1976, Malicka-Kleparska 1988: 83-94, Trask 1993: 118) assert unanimously that the regular *-ing* nominalisation has to be distinguished from the gerund. Compare the forms below taken from Quirk *et al.* (1985: 1291):

(31)

gerund	-ing nominalisation
Brown's deftly painting his daughter is a pleasure to watch	*Brown's deft painting of his daughter*
I dislike Brown's painting his daughter.	

The gerunds in (31) above display a mixture of nominal and verbal features. They can be premodified by the genitive, which is typical of nouns, but unlike the nominalisations they can be modified by the adverb *deftly* and their objects do not require the case marker *of* – the NP directly follows just like the object of a finite VP. Malicka-Kleparska (1988: 87) additionally observes that gerunds appear in clausal structures negated by *not*.

(32)

gerund	-ing nominalisation
John's not painting a picture	*No painting of a picture took place*

The verbal nature of gerunds seems to be further supported by their ability to reflect tense and voice:

(33)
John's painting the picture   *the picture's being painted by John*
John's having painted the picture   *the picture's having been painted by John*

   Apart from syntactic differences, *-ing* nominalisations and gerunds are not consonant in terms of limitations on their productivity. Unlike gerunds, *-ing* nominalisations do not normally appear with stative verbs, e.g. *believe, admire,*

have, and with psychological movement verbs, e.g. *astonish*, *disgust*, *amaze*. Gerunds freely occur with stative verbs (Lees 1960: 66):

(34)   *His having a hat…*   vs.   **the having of a hat*
        His resembling his mother…   vs.   **his resembling of his mother*
        His believing it …   vs.   **his believing of it*

There seem to be no limitations on their occurrence with psychological movement verbs, e.g.

(35)   *Distressing John cannot be supported.*   vs.   **the distressing of John …*
        Perplexing him was unavoidable.   vs.   **the perplexing of him*

    Malicka-Kleparska (1988: 104) concludes that there is a tendency for nominal *-ing* to attach to prototypical transitive verbs characterised by the thematic structure [Agent, Theme]. It does not attach to verbs carrying the thematic grids [Experienced, Experiencer] and [Experiencer, Experienced], as illustrated below:

(36)

Thematic Structure	Verb	-ing nominalisation	gerund
[Agent, Theme]	sb draws sth	drawing	drawing
	sb writes sth	writing	writing
	sb quotes sth	quoting	quoting
[Experienced, Experiencer]	It annoys me.	*	annoying
	It assures me.	*	assuring
	It amuses me.	*	amusing
[Experiencer, Experienced]	sb endures sth	*	enduring
	sb suffers sth	*	suffering
	sb inherits sth	*	inheriting

    Chomsky (1970) observes that gerunds should be syntactically derived. The affixational operation does not affect the category or the meaning of the base. Gerunds have the same properties as their corresponding verbs would have in a finite sentence. They preserve selectional restrictions and subcategorisation frames, may be modified by adverbs, and show contrast in aspect and tense.

(37)
John has painted the picture deftly   –   *John's having painted the picture deftly*
John murdered his wife   –   *John's murdering his wife*

Putting all this evidence together, we have very good grounds for claiming that gerunds are inflectional forms of verbs.

4.3.2. The nominal participle

The term gerund is reserved for structures where the non-finite form occupies a nominal position. However, the forms on the left in (38) are also attested in nominal positions but they lack other nominal features. Thus, the NP which discharges the role of the subject in the corresponding sentence is not in the genitive case when followed by the participle.

(38)

(nominal) participle	gerund
Brown deftly painting his daughter is a pleasure to watch	*Brown's deftly painting his daughter is a pleasure to watch*
I dislike Brown painting his daughter.	*I dislike Brown's painting his daughter.*

In some contexts participles and gerunds cannot be used interchangeably, e.g.

(39)
What I dislike is *Brown painting his daughter* ((nominal) participle)
        / **Brown's painting his daughter.* (gerund)

I saw *Brown painting his daughter* ((nominal) participle)
     / **Brown's painting his daughter.* (gerund)

Despite the differences Quirk *et al.* (1985: 1292) consider the distinction between participles of this kind and gerunds as purely terminological, as both designate a non-finite verb form. They opt for one uniform label – participles. In order to avoid confusion with participles used in adjectival positions we will refer to them as nominal participles – non-finite verb forms which appear in positions syntactically associated with nouns. Thus, we follow Quirk *et al.* in claiming that there is one supercategory which encompasses both participles and gerunds; we differ only in the term we use – nominal participle instead of participle.

Let us now present the reasons why we claim that the forms in (38) should be treated uniformly.

Kuryłowicz (1964: 34) argues that the conjugational system of the verb contains nominal forms – participles and infinitives, which without any morphological modification may discharge the function of nouns and adjectives. The reverse is not possible. This is due to the fact that conjugation includes

nominal subparadigms and is more comprehensive. Participles may feature in nominal and adjectival contexts, taking the required case endings, and still remain verbs.

This phenomenon is also recognised by Haspelmath (1996), who argues for word-class-changing inflection. In words derived by inflectional word-class-changing morphology, the internal syntax of the base seems to be preserved, whereas in words derived by derivational word-class-changing morphology, the internal syntax of the base tends to be altered and assimilated to the internal syntax of primitive members of the derived word-class. Haspelmath concludes that German participles are an instance of the former. Let's consider the phrase:

(40)   *ein   den Richter   überraschendes   Faktum*
       a   the Judge-acc.   surprising-nom.sg.   fact-nom.sg.
       'a fact that surprises the judge'

The external syntax is nominal as the participle *überraschendes* agrees in number, case and gender with its head *Faktum* 'fact'. However, its complement *den Richter* is in the accusative, which means that the internal syntax is verbal, hence preserved. German participles are, therefore, non-finite verb forms.

Applying this approach to English, we could say that the external syntax of the -*ing* forms in (38) is nominal, whereas internally the syntax is verbal. Thus, the NP position is occupied by the clause-like sequence [*Brown('s)* [*painting his daughter*]].[9] Therefore, despite the differences, we will treat all the forms in (38) as representatives of one class, which we call nominal participles.

4.3.3. Other participles
When the -*ing* form functions adverbially it can be regarded as a participle proper. In (41) the deverbal form modifies the main verb, hence we are dealing here with an adverbial participle:

(41)   *Painting his daughter, Brown noticed that his hand was shaking.*
       ['while Brown was painting']
       Brown painting his daughter, I decided to go for a walk.
       ['since Brown was painting']

Likewise, -*ing* forms modifying nouns could be termed adjectival participles (not to be confused with active participles discussed in 4.2.4.):

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[9] One could argue that these are Small Clauses, but we will not go into this here.

(42)   *The man painting the girl is Brown.*

Here the *-ing* form can be replaced by a relative clause of the form 'who/which be + V-ing/ V-s/ed'.

The *-ing* form can also act as an active participle – the head of non-finite VP.

(43)   *Brown is* [*painting his daughter.*]_{VP}

An active participle is a non-finite verb form which is accompanied by an auxiliary verb to express progressive aspect. This construction is used instead of a single word in the morphological paradigm. According to Haspelmath (2000) periphrastic forms may be included in inflectional paradigms in three cases.

Firstly, when the periphrastic construction fills a gap in an inflectional paradigm for the purpose of paradigm symmetry. The table below presents various forms of the 3rd person singular forms of *capere* 'take' in Latin, where the last two are periphrastic:

(44)

	Active		**Passive**	
present	*capit*	'he takes'	*capitur*	'he is taken'
imperfect	*capiebat*	'he took'	*capiebatur*	'he was taken'
perfect	*cepit*	'he has taken'	[*captum est*]	'he has been taken'
pluperfect	*ceperat*	'he has taken'	[*captum erat*]	'he had been taken'

Secondly, periphrasis fills the gap in cases where a certain inflectional pattern is not applicable to some members of the word class. Some adjectives in English lack an inflected comparative form, and comparison is expressed by a periphrastic construction involving the adverb *more* (e.g. *beautiful – more beautiful*).

The third type of periphrasis is categorial periphrasis – a construction involving a verb accompanied by one or more auxiliary words expressing grammatical distinctions, e.g. the English *have*-perfect or the Spanish *estar*-progressive (*estoy cantando* 'I am singing'). Neither of these categories has a corresponding monolectic, i.e. single-word form, so it cannot be said that they fill a gap within the paradigm of monolectic forms. They can only be related to monolectic forms in other languages. The periphrastic constructions usually convey newer, less grammaticalised meanings. Semantic non-compositionality is a hallmark of periphrastic constructions. The meaning of *I have broken* cannot be derived from the meaning of *have* and *broken*. The progressive in English represents this type of periphrasis. Semantically, periphrastic forms should be

analysed like monolectic forms, whereas formally they should be regarded as syntactic phrases (Matthews 1974: 171). Their formation is the domain of morphosyntax.

4.3.4. Limitations on the productivity of participles

Quirk *et al.* (1985: 1292) propose to regard all aforementioned non-finite verb forms simply as participles. Also Huddleston and Pullum (2002) opt for one verbal category, which they call the gerund-participle.[10] It is indisputable that grammatical categories should be established in accordance with the condition of grammatical distinctiveness (cf. Huddleston and Pullum 2002: 31). A question arises which features should be considered in the categorisation procedure. If we stick only to distributional and structural properties we are bound to arrive at only one verbal category marked with the suffix *-ing*. In view of these criteria the distinction between nominal, adjectival/adverbial and verbal participles which we introduced seems to be unmotivated hair-splitting. To show that it has merit we will take a look at limitations on the productivity of the various participle types. We will demonstrate that *-ing* forms are not equally productive in that thematic information and lexical associations carried by verbs play a part in determining their distribution.

When comparing the limitations on the productivity of gerunds and nominalisations we concluded that there are no limitations on the productivity of gerunds/nominal participles and that they can be based on both action and non-action verbs.

Biber *et al.* (1999: 471-474) discuss lexical associations of the progressive aspect. Most verbs that have a strong lexical association with the progressive aspect refer to activities or communication activities and stative verbs describing physical situations, but verbs referring to mental, attitudinal and perceptual states tend to be rarely attested. The common progressive aspect verbs take a human subject, actively controlling the action or state expressed by the verb, i.e. verbs with the thematic grid [Agent, Theme]. Verbs which rarely occur in the progressive take a human subject as Experiencer, undergoing but not controlling the action or state expressed by the verb, or do not take a human subject at all

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[10] Huddleston and Pullum (2002: 82-83) 'reject an analysis that has gerund and present participle as different forms syncretised throughout the class of verbs.' Thus, in the sentences below we have to do with just one inflectional form of the verb marked by the *-ing* suffix:

a.   *He was expelled for <u>killing</u> the birds.*
b.   *They are <u>entertaining</u> the prime minister.*

On our interpretation the form in (a) is a nominal participle and the form in (b) is a verbal participle.

because they describe a relationship between inanimate (often abstract) entities. Another point is that the action, state or situation expressed by progressive verbs can be prolonged. Activity verbs which refer to instantaneous actions cannot appear in the progressive. These actions have virtually no duration. Several of them report an end point. In the examples below we divide verbs according to their frequency of usage in the progressive, as reported by Biber *et al.* (1999).

(45)
Verbs referring to activities and physical events:
frequent: *bleed, chase, shop, starve, dance, drip, rain, sweat, carry, come, drive, eat, go, play, run, walk, work*
rare: *attain, dissolve, find, invent, shut, smash, throw, trap*
Verbs referring to communication acts:
frequent: *chat, joke, kid, moan, scream, talk, ask, say, speak, tell*
rare: *disclose, accuse, exclaim, label, reply, thank*
Verbs referring to physical situations:
frequent: *lurk ,wait, sit, stand, wear, hold, live, stay*
rare: –
Verbs referring to perceptual states or activities:
frequent: *look, watch, feel, stare, listen*
rare: *detect, hear, perceive, see*
Verbs referring to mental/attitudinal states or activities:
frequent: *look forward, study, hope, think, wonder*
rare: *agree, appreciate, attribute, base, believe, concern, conclude, delight, desire, know, like, reckon, suspect*
Verbs of facilitation/causation or obligation:
frequent: –
rare: *convince, entitle, incline, inhibit, initiate, inspire, interest, oblige, promise, prompt, provoke, render*

Summing up, we can say that the occurrence or non-occurrence of a given verb in the progressive is based on a number of factors, and the frequency of occurrence seems to vary from one lexical item to another.

Let us now consider participle clauses as postmodifiers. Adjectival participles do not always correspond to relative clauses containing finite progressive aspect verbs (Biber *et al.* 1999: 630):

(46) *A military jeep travelling down Beach Road at high speed struck a youth crossing the street.*
       (a jeep which was travelling … a youth who was crossing…)

> *Interest is now developing in a theoretical approach involving reflection of Alfvén waves.*
> *(…approach which involves / *is involving…)*

Postmodifying participle clauses are most frequent in academic prose and a few verbs are particularly common in these constructions. These verbs are frequently stative in meaning (verbs of existence, relationship) and hence rarely occur as main clause progressive verbs, e.g. *being, containing, using, concerning, having, involving, arising, consisting, relating, requiring, resulting.*

The upshot of this section is as follows. It appears that the verbal participle differs slightly from its nominal and adjectival counterparts in that the latter accept some of the verbs it eschews. The verbal participle is formed mostly from [Agent, Theme] verbs. Apart from these, nominal and adjectival participles also accept stative, [Experienced, Experiencer] and [Experiencer, Experienced] verbs as their bases. Hence, we will wish to maintain the distinction between the various kinds of participles. Generative theory gives no clear guidelines what importance to assign to evidence from different grammatical components. Even if we give priority to syntax, i.e. to configurational properties, we must allow for the existence of subclasses within a given syntactic supercategory which reflect the interconnections with morphology and semantics.

4.4. Summary

In the preceding sections we have observed that *-ing* forms are capable of designating a variety of categories. Firstly, *-ing* marks derivational categories: active adjectives and nominalisations, both actional and concrete. Secondly, it is inflectional. It marks non-finite verb forms, which feature not only in typically verbal, but also in nominal, adjectival and adverbial positions. However, their internal syntax is always verbal (cf. Haspelmath 1996), i.e. the complements of the forms in question are always verbal, as the following NP is accusative.

Interestingly, when we compare the limitations on their productivity we notice a certain correlation between these inflectional and derivational categories. Kuryłowicz (1964: 35) regards some (not all) derivational categories as rooted in inflection. He says that 'semantically there is a close affinity between: aspect (inflectional) and mode of action (derivational); passive voice (inflectional) and derived intransitive verbs (derivational); participle (inflectional) and verbal adjective (derivational); infinitive (inflectional) and verbal noun (derivational); plural (inflectional) and collective (derivational) (…)'. Likewise, lexical derivatives such as for example *widen* and *deepen* are generated side by side with analytical constructs with the same grammatical

meaning and a similar form produced by the syntax: *make/get wider*, *make/get deeper*. The same sets of bases seem to constitute the input to both inflectional and derivational processes. The outputs reflect the crucial differences between the two components. The products of inflection are regular and predictable whereas the products of derivation are less so. Coming back to the categories marked by *-ing*, we could draw the following parallels: (adjectival and adverbial) participles correspond to active adjectives, the progressive verb form corresponds to the regular nominalisation because both never co-occur with certain stative verbs, and gerunds/nominal participles could be paired with concrete nominalisations as they accept both action and non-action verbs as their bases. It appears that derivational affixes coincide with inflectional ones not only in terms of function, as observed by Kuryłowicz, but also to some extent in terms of form.

(47)

	adjectival / adverbial participle	**verbal (progressive) participle**	**nominal participle**
I N F L E C T I O N	surpris**ing** produc**ing**	is paint**ing** is organis**ing** is stat**ing** *is be**ing**,	John paint**ing** a picture John organis**ing** a party John stat**ing** his views John be**ing** sad,
D E R I V A T I O N	**active adjective** is very surpris**ing** is very produc**tive**	**actional nominalisation** the paint**ing** of the organis**ing** of/ the organisa**tion** of the stat**ing** of/ the state**ment** of *the being of	**concrete nominalisation** a paint**ing** *an organising an organisa**tion** *a stating a state**ment** a be**ing**

Let us now turn to the question of how the polyfunctional *-ing* affix relates to morphological theory. The numerous forms discussed so far could be analysed as an instance of either homonymy or polysemy.

If we opt for homonymy we claim that there are at least three *-ing* affixes. Firstly, inflectional *-ing*, the attachment of which produces a non-finite verb form, i.e. *-ing* [+V]; secondly, two homophonous derivational affixes: *-ing* which derives adjectives – *-ing* [+A] and *-ing* which is used to derive nouns – *-ing* [+N]. Although theoretically possible, this option seems counterintuitive. It is not possible to determine which category we are dealing with after the attachment of the suffix. This information is only provided by the context. Beard (1995: 34) discusses some criteria that have to be satisfied if we wish to argue for affix homonymy. Distinct spelling is one of them. Diachronic evidence of this sort is available for the suffix *-er*. In Old English the spelling of the comparative suffix was *-re* or *-ra* whereas the Agent suffix was written *-ere*. Such diachronic evidence is of limited applicability. Allomorphic variations are far more convincing. In some American dialects the addition of the suffix results in dropping the velar stop in comparative forms but not in the agentive function, e.g. *longer* [lɔŋ-ə] but *singer* [siŋg-ə]. In British English we also observe stem allomorphy but with opposite effects, namely the velar stop in dropped before the agentive suffix but retained in comparative forms – *longer* [lɔŋg-ə], *singer* [siŋ-ə]. It is worth noting that the allomorphy in question pertains to the stem. Were it possible to provide examples of allomorphy within the suffix itself, the argument for affix homonymy would be the more compelling. Let us now turn to diachronic and synchronic evidence for homonymous *-ing* variants. According to Chomsky & Halle (1968: 86) *twinkling* in the sense 'an instance' is made up of two syllables, whereas in other uses it is three syllables long as a result of schwa epenthesis. Beard dismisses this argument, as in most dialects of English the two pronunciations are a matter of free variation. However, the problem of homonymous *-ing* suffixes is more complex than Beard would have it. Diachronic evidence for affix homonymy could be adduced for the nominalisation and the present participle. We learn form the OED that in Old English the suffix forming abstract nouns of action was *-ung* (inflected *-unge*) and *-ing*, which was frequent in derivatives from original *ja-* verbs. The suffix of the present participle and of adjectives thence derived was *-ende*. We find further support for affix homonymy in Huddleston and Pullum (2002: 1597):'in non-standard dialects in both the BrE and AmE families, and also in some now largely extinct upper-class dialects in Britain, the *-ing* suffix is pronounced /ɪn/ in the gerund-participle use (but much less so where it is part of the lexical base, as in *belongings*, *planking*, *railings*, etc.)'. In sum: it is possible to provide some evidence for homonymous *-ing* [+V] and *-ing* [+N] but there is none whatsoever to argue for *-ing* [+A].

Is polysemy any better? Polysemy implies that there is one phonological entity matched with several distinct grammatical functions. The meaning it

conveys is paradigmatic, i.e. context dependent, because in a given context the suffix will display only one meaning (Beard 1985: 129). In the case of *singer* it is possible to identify the meaning of the suffix as an agentive nominalisation out of context. It is not possible to do so in the case of *cooler*, *warmer*, *thinner*, *cleaner* or *drier*. In nominal contexts they will stand for agentive nominalisations, in adjectival ones they will designate comparatives. This solution, however, also has its flaws. If we list affixes with several meanings we fail to capture the fact that they are not the only exponents of a given category. There is no information that *-er* competes with other rival agentive affixes. The same holds for *-ing*. It is the only suffix used to form various non-finite forms, but in the case of derivational categories (nominalisations and subjective adjectives) it competes with other affixes. Should this information be somehow included in the affix entry or should it be dismissed as insignificant? How to encode the information that the same affix marks both an inflectional and a derivational category? Many empirical studies (cf. Badecker and Caramazza 1989) have plausibly argued that derivation and inflection are distinct. Are there then an inflectional *-ing* and a derivational *-ing* despite fragmentary and inconsistent evidence of affix homonymy? Our argument becomes circular. Any theory which fails to account for these phenomena is sadly deficient.

Beard (1976: 109) offers a way out of this impasse. He concludes that affixes are themselves empty and acquire meanings in specific circumstances: 'since the overlap of meaning and structure classes is two-way the rules generating meaning and those generating structure must be separate. In other words, derivation is a process wholly distinct from suffixation.' Phonologically there is one suffix with complex conditions on its attachment. It is a matter of lexical accidence that a particular meaning is mapped onto a particular affix or group of affixes. As the number of affixes is limited in the language, several meanings will be expressed by identical exponents. Beard's proposal has developed into a fully-fledged model and the following section sets out in greater detail those aspects thereof which are relevant to our discussion.

5. Theoretical framework – Lexeme Morpheme Base Morphology

5.1. Introduction

Chomsky (1970) paved way for the rise of morphology as an independent field of study within the model of Generative Grammar. From its inceptive stages morphological research diverged into two directions. Halle (1973) laid the foundation stone for morpheme-based theories of morphology, whereas Jackendoff (1975) can be regarded as the father of lexeme-based theories of

morphology. This fundamental distinction actually corresponds to earlier structuralist models in which morphology was understood either as decomposition of words into their component parts (Item-and-Arrangement) or a dynamic process, i.e. deriving words by the application of certain rules (Item-and-Process). Probably the most articulate advocate of morpheme-based phrase-structural theories of morphology is Lieber (1980, 1992), in whose model bound morphemes have lexical entries and are treated on a par with lexical items. In morpheme-based approaches (e.g. Selkirk 1982) it is assumed that just like the syntactic category X^0 and the phrasal categories above, the morphological categories root (X^{-2}) and stem (X^{-1}) are all in the X-bar hierarchy. Aronoff (1976) expounds a lexeme-based approach in which word formation rules (WFRs) operate on words and affixes do not exist independently of the rules which introduce them. Analyses developed within the lexicalist thrust of research are ill-equipped to account for polyfunctionality of inflectional systems where the relation between form and function is not isomorphic.[11] In the Word-and-Paradigm approach to inflection (Robins 1959, Matthews 1972) it is assumed that certain generalisations can be stated only at the level of the whole word because there in no one to one relationship between elements of form and function. Hence the two are handled separately.

The analysis developed in the following sections will be couched in the model of Lexeme Morpheme Base Morphology (LMBM) put forward and refined by Beard (1976, 1981, 1982, 1984, 1985, 1987, 1988, 1990, 1995). This model stands in stark contrast to morpeme-based approaches in that it maintains a rigid distinction between lexemes and (grammatical) morphemes. Only the former are true linguistic signs. Another fundamental claim, which distinguishes LMBM from other morphological frameworks, is the Separation Hypothesis applied to derivation.[12] In our analysis we shall also have recourse to those concepts and assumptions accepted in the generative lexicalist models which are compatible with LMBM. For example, we find the idea of the Permanent and Conditional Lexicon very appealing. This notion originated with Allen (1978). The Conditional Lexicon is the unbounded list of potential words – products of WFRs and the total range of regularly inflected word forms – reflecting not performance but competence. The Permanent Lexicon provides only a subset of the complex forms in use. We also recognise blocking as the mechanism governing the appearance of complex forms in actual use (Aronoff 1976,

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[11] Aronoff (1976) explicitly excludes inflection from consideration. As for morpheme-based approaches, e.g. in Lieber's framework only affixes have lexical entries, whereas non-affixal operations (ablaut, reduplication) are nor included.

[12] Separationism has hitherto been assumed in works on inflection only.

Kiparsky 1982, Malicka-Kleparska 1985, van Marle 1986, Rainer 1988). Aronoff (1976), who views WFRs as the attachment of an affix with concomitant semantic and syntactic changes in the derivative, focuses on formal operations which have to be performed on the input to arrive at the output form. His work has spawned a rich literature devoted to the conditioning of WFRs (Booij 1977, Szymanek 1980, Bauer 1983, Scalise 1986). Many insightful observations in these works concerning the modification of bases can be adapted to serve our purposes, provided that certain morphological and phonological conditions are regarded as constraints on formal rather than abstract grammatical relations. We will enlarge on this issue in chapter 3. For the time being, we set out the main tenets of the model with special emphasis on abstract grammatical operations.

5.2. *The Separation Hypothesis*

The cornerstone of the theory is the Separation Hypothesis. Apart from Beard it is also argued for by Laskowski (1981), Szymanek (1985, 1988), Halle and Maranz (1993)[13] and Aronoff (1994). Beard proposes an approach to morphology in which there is no direct connection between the side of morphology that deals with sound and the sides that deal with syntax and semantics. The rules determining the phonological representation of bound grammatical morphemes are independent of the rules determining their grammatical or morphosyntactic representation. This conclusion is a direct consequence of the facts of morphological asymmetry, i.e. the fact that one affix may express a whole range of grammatical functions, from zero to several, and any one function may be expressed by as few as zero and as many as several affixes. For example, *-o* in Latin *amo* 'I love' expresses 1st Person, + Singular, + Indicative. Conversely, in the words *walked*, *sang*, two kinds of morpho-phonological operation (affixation and ablaut) are exponents of one category of Past. Lack of one-to-one relationships is not restricted to inflection (cf. Zwanenburg 2000). The suffix in the Dutch example *speel-ster* 'female player' expresses two meaning elements. Two affixes as exponents of one meaning element can be found in, e.g. *character-ist-ic*. Normally, the same semantic relation is expressed by one affix as in *oxygen-ic*.

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[13] The model of Distributed Morphology developed by Halle and Maranz (1993), which also seems well-equipped to deal with cases of morphological syncretism and homonymy because it endorses a variety of Separationism, assumes that at Logical Form, D-Structure and S-Structure terminal nodes lack phonological content. Our personal commitment is to Beard's model, in which only morphophonological operations and the insertion of grammatical morphemes is postsyntactic.

5.3. *The place of morphology in the grammar*

LMBM advocates a strictly modular model of grammar, in which the objects and operations of various subcomponents are distinct and only the output of one set may be the input of another. There are strict boundaries between the lexicon and syntax and the semantic module.

   Grammar is conceived of as two generative components, the lexicon and syntax. Both of them operate on fully specified 'lexicosyntactic' structures which are the output of a third module which feeds both the lexicon and syntax: the base. Lexical and syntactic structures are distinguished after lexical selection. Base, lexical and syntactic rules are abstract operations, which apply to the grammatical representation of a lexeme, i.e. to such grammatical features as + Singular, − Plural, + Feminine, − Masculine, which may be present in a lexeme's feature inventory. In this model of morphology, derivation as well as inflection are viewed as the formal realisation of abstract grammatical categories, and are referred to, in defiance of tradition, as L- and I-derivation respectively.

   After these abstract grammatical processes, morphological operations provide their relevant exponents. Morphological processes apply postsyntactically. Affixation and other morphological processes are effected in an autonomous Morphological Spelling Component (MS-Component) operating on the output of L- and syntactic rules, and mapping grammatical functions to phonology. Free grammatical morphemes also belong to the realm of the MS-Component and require syntactic positions.

   Figure (48) (taken from Beard 1995: 45) outlines a typical LMBM model of grammar.

(48)   **A Typical LMBM Grammar with Autonomous Morphology**

↓	base rules
	lexical insertion
	lexical derivation (but not affixation)
d-structure	
↓	inflectional derivation (morphosyntax)
	movement rules
s-structure	
↓	
morphological spelling	(affixation, reduplication, etc.)
phonology	
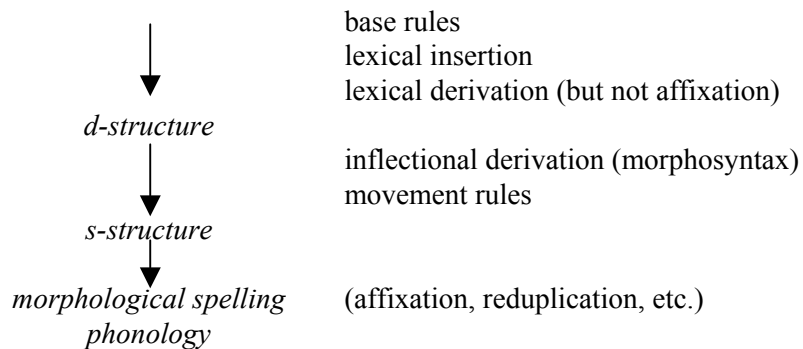
5.4. Lexemes and morphemes in LMBM

All open classes are lexical and thus housed in the lexicon, all closed classes are grammatical and hence belong to the realm of the MS-Component. In Beard's model a lexeme is conceived of as 'a mutually implied triplet, $p \leftrightarrow g \leftrightarrow r$ where

p = a nonnull, lexically specified sequence of phonemes
(phonological representation or matrix)
g = a nonnull set of features specifying lexical and syntactic categories
(grammatical representation or feature inventory)
r = a nonnull set of semantic features
(semantic representation or feature inventory).

Free grammatical morphemes are empty syntactic markers of grammatical functions. (…) Lexemes and free morphemes undergo four mutually independent types of operations:
   a) A lexical operation is any modification of any *g* proper to the lexicon;
   b) An inflectional operation is any modification of any *g* proper to the syntax;
   c) A spelling operation, $m^\wedge$, of the set $M^\wedge$, is any modification of *p* of a fully specified lexeme, *l*, or free morpheme, *m'*, conditioned by *c*, for example, $p \rightarrow p + m^\wedge / c$, where *c* comprises *p*-, *g*-, and/or *r*-features;
   d) A semantic operation is any modification of *r'* (Beard 1995: 46-47).

(49) illustrates a lexical entry for the Turkish verb *gel-* 'come' (Beard 1995: 47).

(49)   g =   + Verb
                                     Subj __

                                     $\Updownarrow$

                             p =   /gel/

                                     $\Updownarrow$

                             r =   GO (X) TO (Y) FROM (Z)
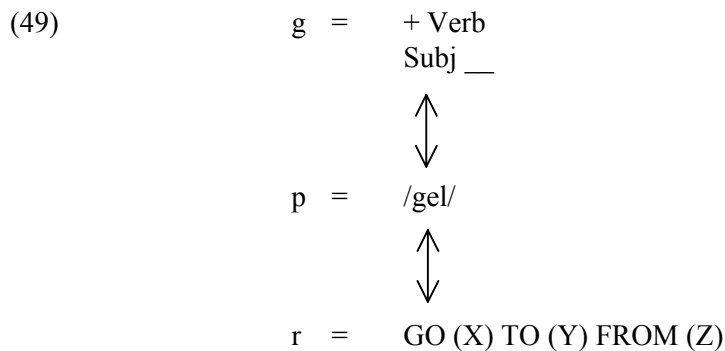
Derivational (morphological) rules operate on grammatical categories *g* which comprises *morpholexical* categories of the lexicon and the *morphosyntactic* inflectional categories of syntax. Spelling operations account for bound

morphemes: affixes, prosodic variations, revowelling. They also include all free morphemes. This component spells out the phonological modifications of the stem which express the various categories of *g* in any given lexical representation, *l*, or copies free grammatical morphemes into appropriate structural positions provided by the syntax. Contrary to Matthews (1974), in LMBM there are no significant distinctions between bound derivational and inflectional morphemes (the Integrated Spelling Hypothesis). Beard supports the Split Morphology Hypothesis (Perlmutter 1988: 95) with the proviso that the split is restricted to derivation (in his usage), i.e. to the abstract grammatical level. Inflection and word formation are distinct but there is only one integrated spelling component. Otherwise unwarranted reduplication of spelling rules would ensue in the case of very productive affixes which mark both lexical and inflectional derivation in many languages, e.g. English -*ing*.

5.5. *Inflection vs. Derivation in LMBM*

In contradistinction to morpheme-based theories in which there is no theoretical distinction between inflection and derivation (Lieber 1981, 1992) or approaches which argue for a derivation-inflection continuum (Bybee 1985),[14] it is assumed in LMBM that inflection and derivation can be distinguished. Derivation and inflection, termed L-derivation and I-derivation respectively, are distinct aspects of morphology which correspond to two kinds of grammatical functions *g*: g_L, inherent (morpho)lexical categories, and g_I, (morpho)syntactic inflectional categories. L-rules operate on lexical grammatical categories (g_L) interior to the word in the lexicon, while inflectional (I-) derivation operates on the functional categories (g_I) in phrase structure.

This organisation of features dovetails with the basic assumptions of the Principles and Parameters framework, where the origin of inflectional features for verbs is the Agr node of Infl (Chomsky 1981, 1992, Pollock 1989, Ouhalla 1990). (50) illustrates the Turkish lexical base raised to Infl. The Infl node has been provided with the inflectional category requirements for 'I could come'.

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[14] Bybee (1985) advocates the view that the derivational or inflectional nature of a given rule is a scalar property, which is determined by the principles of generality and relevance. For a critical evaluation of the model see, e.g. Carstairs-McCarthy (1992: 172-179).

(50)   **Infl**

g_I =   – Plural   ← Number Switch
              + 1st Person   ← Person Switch
              + Past   ← Tense Switch
              + Negation   ← Negation Switch
              + Potentiality   ← Mode Switch

g_L =   + Verb   **BASE GRAMMATICAL**
              Subj __   **REPRESENTATION**

                ⇕

p   =   /gel/   **PHONOLOGICAL**
                                REPRESENTATION

                ⇕

r   =   COME   **SEMANTIC**
                                REPRESENTATION

This feature arrangement is fed into the MS-Component, which attaches affixes conditioned by these features. When the spelling operations begin to apply, the first operation can only modify the phonological base, since this is the only phonological representation available. The confluence of the *g*, *p* and *r* features builds outwards from the base, responding to each feature or set of features that serve as conditions on its operations. The inflectional features of the terminal node are expressed following the spell-out of all lexical features.

5.5.1. Distinguishing criteria
In order to be able to specify the nature of a given operation we need to devise reliable tests to distinguish inflection from word formation, tests which will show how to tell inherent morpholexical features from morphosyntactic ones. Often there is no unanimity among authors as to whether a given process should fall in the domain of inflection or derivation. Various linguists (Greenberg 1966, Halle 1973, Anderson 1982, Bauer 1983, 1988, Scalise 1988, Stump 1998, Booij 2000) have devised a number of conflicting criteria which are supposed to facilitate identification. The overall picture is far from clear and old problems recur though restated in more fashionable terminology. The classification of a given process hinges to a large extent on our prior definition of word vs. lexeme or morpholexical vs. morhosyntactic features. Beard proposes three basic tests.

The **Peripheral Affix Test** is a modified version of the traditional assumption that derivational affixes appear closer to the root than inflectional

formatives. According to this test, inflectional marking is outside word formation marking only when it is syntactically engaged. This amendment makes it possible to account for some German derivational affixes which require inflectional ones to precede them in some contexts, e.g. *frühling-s-haft* 'spring-like'. Here the inflectional *-s-* plays no part in the syntax, hence it precedes derivational *-haft*.

Beard (1995: 102) also puts forward the **Free Analog Test**, which has no equivalent criterion in the pertinent literature. It shows the criterion of syntactic relevance/determination from a different angle. It captures the fact that derivation is never expressed by free morphemes. When V is raised through several category levels beneath Infl, Modal, Aspectual and Tense features accumulate under Infl and are realised either by sequences of affixes in morphologically rich languages, or by means of auxiliaries, Case markers and other free grammatical morphemes in isolating languages. If we assume that grammatical categories such as Modality, Aspect and Case are universal, languages differ only in their realisation.[15] L-derivation rules, however, are never marked by free morphemes because the lexicon cannot generate syntactic structure. Its category functions must always be expressed by means of bound morphemes.

The **Arbitrariness Criterion** is another diagnostic of the kind of derivation involved. If grammatical categories are arbitrary, i.e. lexically set to be invariable, the category in question is an L-category. Nouns are grouped into different classes regardless of their meaning, as for example German *das Ding* 'the thing', *die Sache* 'the thing'. Likewise, there are nouns with fixed gender such as *der Bruder* 'the brother', *die Schwester* 'the sister', and singularis tantum and pluralis tantum nouns, e.g. *die Liebe* 'love' and *die Eltern* 'parents' respectively.

Beard has abstracted and refined the most relevant observations from the ongoing discussion of morphology. By considering his criteria in unison we stand a fair chance of determining whether a given process is derivational or inflectional.

5.5.2. *Inventory of morpholexical and morphosyntactic features*

As far as grammatical features are concerned a number of classification systems each availing itself of different terminology have been proposed. There is agreement that morpholexical (lexicosemantic) features encode relations within

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[15] This is the principle of Universal Grammar (Chomsky 1981), which says that there is a set of linguistic universals (parameters) valid for all particular grammars. Differences constitute cross-linguistic variation and are due to different parameter settings.

the lexicon, whereas morphosyntactic properties encode phrase level relations. Within the latter a further division is established into properties which are connected with syntactic relations of agreement and government and those which are not. They are referred to as syntactical and semantic (Kuryłowicz 1964), contextual and inherent (Booij 1996), distributional and structural (Payne 1997) respectively. A full discussion and evaluation of those and other classification systems is beyond the scope of this investigation. In what follows we adopt Beard's classification of features as either morpholexical or morphosyntactic.[16]

Beard proposes the following classification of features. Of the cardinal verbal categories such as Verb Class, Transitivity, Modality, Mood, Aspect, Voice, Tense, Person and Agreement, only the first two are morpholexical features. All the remaining verbal categories are expressed by a free morpheme in some language and cannot be fixed arbitrarily for a lexical subclass. Thus, Beard's findings converge with other classification systems. However, the application of his tests leads to different results with respect to nouns. Number, Gender and Noun Class are morpholexical nominal categories, while Agreement and Case are inflectional. It transpires that in Beard's classification Number is a mophosyntactic category for verbs but morpholexical for nouns. Traditionally, Number has been regarded as an inflectional nominal category.

Beard (1985, 1995: 111-115) provides robust evidence to the contrary. As it is of relevance to our discussion we will enlarge on the topic. The idea that Number is syntactically determined is untenable for several reasons. First of all, according to Chomsky (1970) any process which is not fully productive and semantically regular belongs to the realm of the lexicon. Plural is characterised by formal and semantic irregularities/subregularities. There are numerous examples of formal irregularity, e.g. *deer*, *oxen*, *women*, *lives*, *foci*, *phenomena*, *antennae*, *indices*. Some nouns have lexically determined Number, i.e. pluralis tantum nouns, e.g. *pants*, *oats*, *pliers*, and singularis tantum nouns, e.g. *air*, *semantics*, *hate*, *pork*. There is no connection between the constraints on the semantics of pluralisation and the particular form that affixation takes. Secondly, in highly inflectional languages (Russian, Latin, Sanskrit) pluralisation results in a shift in paradigm. There are two separate sets of case endings: one for the Singular and one for the Plural. Thirdly, languages in which inflection has atrophied preserve affixation as a means of marking the Plural, e.g. in Bulgarian and Hindi. In addition to this, Number markings may be borrowed, which never happens to inflectional affixes, e.g. English *-i*, *-a*, *-ae* or *-es* and no language marks Number with a free morpheme. We might add another argument to the list

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[16] For a detailed discussion the reader is referred to Beard (1995: 102-154).

above. If an inflectional affix (in contradistinction to a derivational one) precludes the addition of derivational affixes, plural forms should not constitute input to further derivation. The fact that this is not the case, adds fuel to the argument that Number is a morpholexical category. Booij (1996) provides examples from a variety of languages where plural forms serve as input to derivation, e.g. Dutch – [*boek-en*]-*achtig* 'like books', Italian – *lavapiatti* 'dishwasher', Spanish – *tocadiscos* 'record player'. Stump (1998: 18) says that in Breton plural nouns can be converted to verbs, e.g. *pesk-ed* 'fish-pl.' gives rise to *pesketa* 'to fish' and they can serve as a base for privative adjectives, e.g. *ler-où* 'sock-pl.' – *dileroù* 'without socks'.

As in highly inflectional languages a single affix often serves as an exponent of Number, Gender and Case, Plural must be determined by the operation of abstract rules on lexical features. The features in question are [± Singular] [± Plural]. The existence of only one feature [± Plural] would imply that all nouns have to be either Singular or Plural, which is not the case.[17] Using two features enables us to characterise all Number phenomena: count nouns, mass nouns, pluralis tantum and singularis tantum nouns. The pluralisation rule operating on a singular noun can be specified as follows:

(51)   + Singular   – Singular
             – Plural   ⟶   + Plural

5.6. Types of lexical derivation

L-derivation and inflection cannot be distinguished on the basis of the former changing the L-category of a lexeme. Aronoff (1984) has pointed out that there seem to be no L-rules of the type V → N, where any verb of any lexical (sub)category is transformed into a noun of any lexical (sub)category. Instead, verbs serve as bases for the derivation of, e.g. subjective, objective, instrumental nouns, plural and feminine nouns, but not nouns capable of fulfilling all those functions simultaneously. A major function of L-derivation is to change the L-category of lexemes. But it is the features Subjective, Objective, Plural or Feminine that define the categories, rather than the N, V, A labels. The L-insertion rule matches the N, V, A node labels with features like [± Animate], [± Feminine], [Noun Class], [Verb Class], [± Transitive], [± Gradable], and not

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[17] Count nouns may be either Singular or Plural, mass nouns or singularis tantum nouns are Singular and never Plural, pluralis tantum nouns are always Plural and never Singular. There are also collectives such as *the rich*, which are morphologically Singular but semantically Plural.

[± N, ± V]. We can distinguish L-rules from inflectional rules by the fact that 'the former always change (insert or adjust) L-categories, while inflectional rules simply copy features, thus adjusted, for agreement (Beard 1988: 35)'.

There are four different types of L-derivation rules:
1. feature value switches
2. expressive derivation
3. transposition
4. functional L-derivations

The first type of rule involves a simple *switch*, or *toggle* which resets the ± or other value of grammatical features. This type of operation is shared by both the L- and I-derivation component. The only difference lies in the nature of features which are toggled. In the case of L-derivation it will always be the inherent lexical features, whereas I-derivation will manipulate the value of morphosyntactic features. If we recall representation (50) depicting the Turkish verb, inflectional rules can switch the value of Number, Person, Tense, Negation, Mode. They have no access to g_L categories such as Verb Class and Transitivity. We can also envisage a derivational rule which consists solely in the resetting of the value of some inherent lexical feature. Languages with natural gender generally have a rule which derives Feminine correlates from unmarked Masculine nouns, for example Polish *nauczyciel* 'teacher' (unmarked Masculine) → *nauczyciel-ka* 'female teacher' (marked Feminine).

Expressive derivations, which are still poorly understood, do not change the meaning or lexical class of the lexemes over which they operate. They can apply recursively. They reflect the subjective attitudes of the speaker rather than a relational function.

Transposition involves a change in lexical class without any semantic or grammatical function alterations. Converting the adjective *dry* into a verb consists in assigning it to a Verb Class possessing certain Transitivity features. Transpositions are a consequence of the fact that the relation between syntax and semantics is not isomorphic, and grammar requires a mechanism for shifting semantic categories between lexical classes.

The functional L-derivations operate over grammatical functions like Subject, Object, Locus, Means, Manner, Possession and the like. In the majority of cases functional derivation leads to category shift, e.g. *kill-er*, *attend-ant*, *escap-ee* (V → N + Subject). Transposition and functional derivation are separate, though, as we may envisage processes which change grammatical function without concomitant change of class, e.g. *fish-ery*, *heron-ry*, *cream-ery* (N → N + Locus).

5.6.1. Transposition

In this section we have a closer look at transpositional processes since they are involved in the formation of VNs in Irish.

In LMBM 'the Lexicon may transpose any member of any major lexical class (N, V, A) to any other major lexical class by providing it only with the lexical G-features of the target class and neutralizing (but not deleting) the inherent G-features of the base' (Beard 1995: 177). 'Neutralizing' means that the value settings of the grammatical features of the base are set at some value which the MS-Component recognises but does not respond to, for example, [+ Transitive] → [0 Transitive].

Verbal transposition consists in the addition of verbal category features. Any item possessing the features of Verb Class and Transitivity belongs to the class which is marked in current syntactic theories as [+ V, – N].

Adjectivisation is effected by the addition of the feature [± Gradable]. The current syntactic features [+ V, + N] are equivalent to [+ Gradable].

A nominalising L-rule provides the features of substantives. Number, Gender, and Noun Class are the parameters identifying nouns. All nouns possess the features Number and Noun Class, and those referring to animate beings possess Gender features. As not all these features are grammatically relevant, and some lack morphological marking, we can assume that all three features are present in the g_L representation of substantives but not all of them have ± values for them. Mass Nouns possess no values for Number features. Speakers can impose plurality on mass nouns, e.g. *two beers*, because Number features are present in their representation. Mass nouns possess the features [0 Plural, 0 Singular]. The features [0 Plural, 0 Singular] and [0 Noun Class] are obligatorily added to nominal transpositions, and values must be provided for one or the other. [0 Feminine, 0 Masculine] are added conditionally in some languages.

6. Summary

The purpose of this chapter was to set the scene for the discussion of VNs in Irish. Having presented the basic facts about the language, we turned to the familiar English suffix *-ing* which can be regarded as the counterpart of the various morphophonological exponents we encounter in Irish. The examination of the grammatical categories expressed by means of this suffix led us to the conclusion that it may be possible to draw a definite dividing line between inflectional and derivational categories, and that there may be some parallels in the operation of derivational and inflectional processes. We also decided that the LMBM model of morphology is capable of providing a structured account of the

English material. By endorsing Separationism, it gets round the problems of polysemy and homonymy faced by lexicalist theories such as Lieber's (1981) in which affixes are listed in the lexicon. We also presented those aspects of the theory which are pertinent to the analysis of VNs, a question to which we now turn.

2 The Irish Verbal Noun
and its grammatical categories

1. Introduction

This chapter investigates the syntactic contexts in Irish in which VNs are attested, with a view to establishing the inventory of categories which the blanket term VN covers. Ó hAnluain (1999) makes a distinction between VNs proper (*ainm briathartha ceart*) which function as both nouns and verbs, and VNs which have the same form as the VN proper, but which behave like ordinary nouns (*gnáth-ainmfhocal*). It may sometimes be difficult to draw a definite distinction between the two groups. However, relying on syntactic and morphological criteria we can separate those contexts in which we are dealing with ordinary nouns from those in which we are dealing with verbs.

1.1. Nominal contexts

We have to do with ordinary nouns in the following cases:
1. When the form in question is preceded by the definite article *an*:

(1)
 a.   *Tá an scúdú   thart.*
        is   the examine-VN over
        'The exam is over.'

 b.   *Is maith an t-ithe é.*
        is good   the eat-VN it
        'It makes good eating.'

2.   When it is modified by typical nominal modifiers, i.e. an adjective (2a), a noun in the genitive case (2b, c) or a numeral (2d):

(2)
 a.   *Beidh feitheamh fada ort.*
        will-be wait-VN   long upon-you
        'You will have a long wait.'

b.   *luí   na gréine*
     go down-VN the sun-gen.
     'sunset'

c.   *glanadh an earraigh*
     clean-VN the spring-gen.
     'spring cleaning'

d.   *an chéad léamh   ar bhille*
     the first   read-VN on bill
     'first reading of a bill'

3.   When it is in the plural:

(3)
a.   *Fuaireas   orduithe   ón   rí.*
     I-received order-VN-pl. from-the king
     'I received orders from the king.'

b.   *imeachtaí   an lae*
     happen-VN-pl. the day-gen.
     'the events of the day'

4.   When it is inflected for case. Four syntactic cases are distinguished in Irish,
     though morphological case marking is not common within the noun itself.
     Morphologically, it contrasts the Common Form, corresponding to the
     traditional nominative, accusative, and dative cases, with a distinct marking
     for the genitive case. This can be seen in the VN as well:

(4)
	VN Common Form	**VN Genitive Case**
a.	*troid*	*fonn troda*
	fight-VN	eagerness fight-VN-gen.
	'fighting, fight'	'eagerness for fighting'
b.	*gearán*	*cúis ghearáin*
	complain-VN	cause complain-VN-gen.
	'complaining, complaint'	'cause for complaining'

1.2. Actional vs. concrete nominalisations

Like in English, in their nominal use VNs have a regular meaning – 'act of V-ing', and in addition they may have a more specialised (lexicalised) meaning denoting 'something connected with the verb'.

(5)

bualadh '(act of) hitting, striking' *bualadh arbhair* hit-VN corn-gen. '(striking) threshing of corn'	*bualadh* 'fight' *Bhí bualadh mór ann aréir ag an damhsa.* was beat-VN big there last-night at the dance 'There was a big fight last night at the dance.' *bualadh bos* beat-VN hand-gen.pl. 'clapping of hands/applause'
déanamh 'doing, making' *déanamh oibre* do-VN work-gen. 'doing of work' *déanamh ceoil* do-VN music-gen. 'composition of music'	*déanamh* 'ability to do, make, sufficiency' *Tá déanamh gnó ann.* is do-VN business-gen. in-him 'He is well able to transact business.' *Tá déanamh mo ghnó agam de.* is do-VN my business-gen. at-me from-it 'I have enough of it to do me.'
meilt 'grinding, crushing, spending' *meilt arbhair* grind-VN corn-gen. 'grinding, milling of corn' *meilt bia* grind-VN food-gen. 'chewing (consuming) of food'	*meilt* 'incessant talk'

As far as the derivational category of Nomina Actionis or 'abstract deverbal action nouns' is concerned, it is commonly assumed (Bauer 1983, Malicka-Kleparska 1988, Szymanek 1989: 135) that there is one derivational rule with well-behaved semantics, i.e. 'act(ion)/process of V-ing'. All other meanings have to be specified individually in the lexicon. Regular nominalisations are subject to the inexorable process of lexicalisation, which from the semantic point of view yields concrete objects at its final stage. In section 4.2.3. of chapter 1 we have questioned this stand with respect to the English data and suggested that the forms under discussion may be products of two separate processes. An analysis opting for one WFR additionally falls into a quandary when confronted with the Irish data. Nouns with regular meaning are rarely found in nominal positions in sentences. These positions seem to be reserved for underived nouns or lexicalised usages of the nominalisations in question. Let us consider the object position after *Ní maith liom X* 'I don't like X'. When the object position is occupied by an underived noun or a lexicalised nominalisation the resulting sentence is grammatical, e.g.

(6)   *Ní   maith liom   feoil.*
        is-not good with-me meat
        'I don't like meat.'

        Ní   maith liom   do mheilt.
        is-not good with-me your grind-VN
        'I don't like your incessant talk.'

When the same position is occupied by the VN with an accompanying modifier the sentences sound decidedly odd.

(7)   *?Ní   maith liom   bualadh arbhair.*
        is-not good with-me beat-VN corn-gen.
        'I don't like threshing of corn.'

        ?Ní   maith liom   déanamh ceoil.
        is-not good with-me make-VN music-gen.
        'I don't like composition of music.'

In syntactic terms, regular and lexicalised nominalisations do not behave in a uniform fashion. Our analysis will have to account for this discrepancy.

1.3. Verbal contexts

In this subsection, we examine contexts where the VN has a verbal function. Irish employs VNs in constructions corresponding to non-finite clauses in other languages. Irish is a VSO language insofar as the unmarked order in finite clauses is Verb, Subject, Direct Object, everything else, as in:

(8)   *Buaileann sé a mhadra go minic.*
         beats   he his dog   often
         'He beats his dog often.'

   In non-finite clauses, when the object is present, we find two word orders. In the first the object precedes the VN and in the second it follows the VN. In constructions where the object of a complementised clause comes before the VN, the latter is preceded by the particle *a + lenition.* In this type of construction the VN is translated into English by means of an infinitive. This configuration is found in various modal constructions expressing obligation, ability, success or failure, e.g.

(9)   *Caithfidh sé an páipéar   a   cheannach.*
         must   he the newspaper PRT buy-VN
         'He has to buy the newspaper.'

         Tá orm   é   a   dhéanamh.
         is upon-me this PRT do-VN
         'I must do it.'

         Ní féidir le   Bríd Fraincis a   fhoghlaim.
         is not able with Bríd   French   PRT learn-VN
         'Bríd cannot learn French.'

         Ba   mhaith   liom   sin   a dhéanamh.
         would be good   with-me this PRT do-VN
         'I would like to do that.'

         Theip orm   an bád a   dhíol.
         failed   upon-me the boat PRT sell-VN
         'I failed to sell the boat.'

The same word order is attested in periphrastic constructions expressing completive and prospective aspect, e.g.

(10) *Tá sé tar éis an bád a dhíol.*
      is he after   the boat PRT sell-VN
      'He has sold the boat.'

      Tá sé ar tí   bróga   a cheannach.
      is he about to shoes   PRT buy-VN
      'He is about to buy shoes.'

      Tá sé chun   bád   a dhéanamh.
      is he towards boat   PRT make-VN
      'He intends to build a boat.'

   The second type of construction employing the VN expresses progressive aspect. This is a construction made up of the substantive verb *bí*, which acts as an auxiliary verb carrying tense and person distinctions, followed by the preposition *ag*, which is an aspectual marker. This in turn is combined with the VN acting as the carrier of semantic information in the sentence (Ó Dochartaigh 1992: 46).
   In this construction the object directly follows the VN and is in the genitive case governed by the VN.

(11) *Tá sé ag baint   an fhéir.*
      is   he PRT cut-VN the grass-gen.sg.
      'He is cutting the grass. '

      Tá sé ag   ní   na gcupán.
      is he PRT wash-VN the cup-gen.pl.
      'He is washing the cups.'

When the object in a transitive progressive phrase is pronominal the construction is more complex. The pronoun is in the genitive case, which means that it is replaced by the corresponding possessive form. There is a clear connection between the genitive case of nouns and possessives, e.g. *hata Sheáin* 'hat Seán-gen. / Seán's hat' corresponds to *a hata* 'his hat'. Table (12) lists personal pronouns with their possessive equivalents. Possessive pronouns trigger mutation of the initial consonant of the following noun.

(12)   PERSON   NOMINATIVE   GENITIVE

	PERSON	NOMINATIVE	GENITIVE		
SG.	1.	mé	mo [mə^L]	mo chapall	'my horse'
	2.	tú	do [də^L]	do chapall	'your horse'
	3. MASC	sé	a [ə^L]	a chapall	'his horse'
	FEM	sí	a [ə^h]	a capall	'her horse'
PL.	1.	sinn	ár [ɑːr^E]	ár gcapall	'our horse'
	2.	sibh	bhur [uːr^E]	bhur gcapall	'your horse'
	3.	siad	a [ə^E]	a gcapall	'their horse'

Singular possessive pronouns with the exception of the third person singular feminine aspirate the initial consonant of the following word. *a* 'her' prefixes *h* to word initial vowels. All plural possessive pronouns cause eclipsis.

As has already been pointed out, in the progressive construction pronouns take the form of possessives and are placed before the VN. The particle *ag* is replaced by *do* in the 1st and 2nd persons, whereas 3rd person possessives are replaced by *á* (Doyle & Gussmann 1997: 204, Christian Brothers 1980: 129). The same mutations are observed as with plain possessives, e.g.

(13)

b [b] → bh [v]   **b [b] → mb [m]**

Tá sé do mo bhualadh.   *Tá sé dár   mbualadh.*
is   he PRT my beat-VN   is he PRT-1st pl. beat-VN
'He is beating me.'   'He is beating us.'

Tá sé do do bhualadh.   *Tá sé do bhur mbualadh.*
is he PRT your beat-VN   is he PRT your beat-VN
'He is beating you.'   'He is beating you-pl.'

Tá sé á   bhualadh.   *Tá sé á   mbualadh.*
is   he PRT-masc. beat-VN   is he PRT-3rd pl. beat-VN
'He is beating him.'   'He is beating them.'

Tá sé á   bualadh.
is   he PRT-fem. beat-VN
'He is beating her.'

So far we have observed that VNs are characterised by two kinds of construction. In the first the object precedes the VN, and in the second it is in the

genitive case and follows the VN. Is this difference indicative of the existence of two separate categories? This question will be addressed in further sections.

The VNs in this subsection are clearly different from the nominal VNs discussed in 1.2. Thus, an ordinary, underived N cannot replace the VN phrase in:

(14)   *Caithfidh sé an páipéar   a   cheannach.*
         must   he the newspaper PRT buy-VN
         'He has to buy the newspaper.'

         *Caithfidh sé an páipéar.
             must   he the newspaper

Similarly,

(15)   *Tá sé do mo bhualadh.*
         is he PRT my beat-VN
         'He is beating me.'

         *Tá sé fear.
          is he a-man

Secondly, in all the constructions discussed in 1.3., the VNs preserve the subcategorisation frame of the finite V, e.g.

(16)   *Díolfaidh sé an bád amárach.*
         will-sell   he the boat tomorrow
         'He will sell the boat tomorrow.'

Cf.   *Caithfidh sé an bád a dhíol   amárach.*
        must   he the boat PRT sell-VN tomorrow
        'He has to sell the boat tomorrow.'

In a typical nominalisation, this does not happen.

(17)   *D'ith sé an bia inné.*
         ate   he the food yesterday
         'He ate the food yesterday.'

Cf.   **Is maith an t-ithe inné é.*   (cf. (1b))
         is good   the eat-VN yesterday it

1.4. Summary

To sum up this section: we hope to have demonstrated that VNs are not a hybrid category. Rather than dealing with a noun and verb in one we opted for homonymy. We can draw a distinction between nominal and verbal uses. Where the resulting form is a noun we have to do with derivation, where no change of category is involved we have sound grounds to assume that we are dealing with an inflectional form of the verb. But this division hides more complexity than meets the eye. Even finer distinctions are needed to do justice to the facts of the language. The following section addresses the problem of VNs proper, which exhibit two kinds of construction with an object. The discussion of nominalisations, which appear to be the product of two WFRs, is postponed until later sections.

2. Establishing categories for VNs

2.1. Introduction

Morphology abounds in cases where the same morphophonological exponents mark categorially distinct items. Using syntactic, morphological and semantic criteria we can identify contexts in which we are dealing with nominalisations and verbs. For example, participles in Biblical Hebrew may have the distribution of non-derived nouns with the direct object appearing in a genitive-like construction called the construct. They may also take modifiers and complements typical of finite verbs, in which case the direct object is preceded by the accusative particle *et* (cf. Aronoff 1994: 25-27). Hebrew participles, which are inflectional, are, therefore, homophonous with nouns, which are derivational.

   Kuryłowicz (1964: 158-160) regards government as a main criterion for distinguishing deverbal abstracts from infinitives. He points to 'their respective range of occurrence in the language'. The infinitive, which is an inflectional form, may be built from any verbal root and/or stem. Verbal abstracts, being derivational, are represented by small derivational groups limited in their occurrence. Nominals are characterised by different formatives, whereas the structure of the infinitive tends to be more or less homogenous. Another criterion is the obligatory declension of the abstract, juxtaposed with the lack of inflection of the infinitive. All things being equal, syntactic behaviour is a decisive factor. Infinitives are characterised by verbal government (e.g. accusative), whereas abstract nouns have nominal government (e.g. genitive).

According to Kuryłowicz (1964: 159) 'apparently declined infinitives are often derivatives charged with a secondary syntactic function corresponding to that of a real infinitive', or else we may have to do with a distribution of allomorphs (contextually conditioned variants) of the infinitive depending on the context, e.g. English infinitives with and without *to*. On the other hand, the verbal nominalisation may distinguish aspect, voice, even person and number, just like the corresponding personal verb.

The lack of verbal government can be decisive for classifying Polish forms in -*nie* and -*cie* as verbal abstracts in spite of the fact that they distinguish aspect, e.g. *zapisanie* (perfective) vs. *zapisywanie* (imperfective) 'writing down', but *zapisać adres* 'to write down (infinitive) an address (acc.)' vs. *zapisanie adresu* 'writing down (noun) of an address (gen.)'.

Kuryłowicz puts forward three distinguishing criteria: government, the presence of inflection, and the fact that the formation of infinitives is categorial and relatively uncomplicated, whereas abstract nouns, being a derivational category, are characterised by irregularities. These criteria recur in the literature under different guises (Greenberg 1966, Halle 1973, Anderson 1982, Bauer 1983, 1988, Scalise 1988, Stump 1998, Booij 2000) as the diagnostic tests for deciding whether a given form is inflectional or derivational. They have been called different names by different authors – the relation to the syntax, change in category, affix ordering, commutability, productivity etc.

Let us apply them to our data. In view of the first criterion Irish VNs represent two different categories. VNs in modal, prospective and perfective constructions are infinitives, i.e. non-finite verb forms, because the noun acting as object is in the accusative, i.e. they display verbal government. VNs in the progressive construction are instances of abstract nominals, because the following noun is in the genitive case, i.e. they are characterised by nominal government.

(18)   *Caithfidh sé litir   a   scríobh.*
         must   he letter-acc. PRT write-VN
         'He has to write a letter.'

         Tá sé ag scríobh   litreach.
         is he PRT write-VN letter-gen.
         'He is writing a letter.'

This interpretation is additionally supported by the fact that some VNs can be inflected for the genitive case, e.g.

(19)   *lucht   ólta   poitín*
       people drink-VN-gen. whisky-gen.
       'people drinking home-distilled whisky'

       Tá an coirce in alt   a bhainte.
       is   the oats   ready for   its reap-VN-gen.
       'The oats are ready for reaping.'

The presence of a distinct genitive would suggest that we are dealing with a noun.

The third criterion postulated by Kuryłowicz is not of particular use as in Irish, unlike in Polish, infinitives and verbal abstracts are marked by the same morphophonological exponents. On the one hand, the process is categorial (productive) as every verb has a corresponding VN, but on the other hand there are VNs which do not have corresponding verbs. Gaps are characteristic of derivational processes. There are different simple nouns which do not have a corresponding finite verb or infinitive, and yet appear in the progressive phrase (Wigger 1972: 210-212, Ó Sé 2000: 364), e.g.

(20)

N	VN	Finite V
fearthainn 'rain'	ag fearthainn 'raining'	*
magadh 'mockery'	ag magadh 'mocking'	*
obair 'work'	ag obair 'working'	*
bladar 'flattery'	ag bladar 'flattering'	*

Also nouns ending in -*acht*, -*íocht* derived from agents may function as VNs in the progressive phrase.

(21)

N	VN	Finite V
bádóir 'boatman'	ag bádóireacht 'boating'	*
dioscaire 'sb doing light (house) work'	ag dioscaireacht 'doing odd jobs'	*
scéalaí 'story teller'	ag scéalaíocht 'telling stories'	*
ceardaí 'craftsman'	ag ceardaíocht 'working as a craftsman	*

The existence of a considerable number of formatives is typical of derivational processes. An inflectional account of VNs will have to come to

grips with the plethora of suffixes involved. We have a strange situation, where a class of forms termed VNs is categorial and at the same time irregular. Traditionally inflection is regarded as productive and regular. Inflectional processes apply automatically. By way of illustration, every verb takes the inflectional category of past tense. Regularity of inflection implies the formatives involved are not numerous and that their distribution is predictable. The formation of infinitives in Irish is certainly categorial (productive), as every verb has a corresponding infinitive, but the regularity of the process of affixation leaves a lot to be desired.

However, we should not forget that inflectional affixation may be obscured by the operation of historical processes. Abstract morphosyntactic elements quite often have various morphophonological representations (Aronoff 1994: 22-23). The English Past in verbs does not always consist of an underlying /d/. This morphosyntactic function does not have a unique morphological form. It varies according to the verb whose past marker we are specifying. /d/ is the default realisation. There are about 250 irregular verbs which Quirk *et al.* (1985) group into seven different classes. Aronoff (1994: 22) says that 'in traditional morphology there are many instances where phonologically quite diverse forms occupy a single morphosyntactic cell in the general morphological paradigm, their distribution being determined by base lexemes or inflectional classes of lexemes'. Our task, therefore, is to separate the sheep from the goats. On the one hand, we need to identify those suffixes, the addition of which is contingent on base lexemes (irregular formations); on the other, we need to specify the default representation of the regular ones whose distribution depends on inflectional class.

If we want to opt for a derivational account, irregularity is not a problem. Derivational suffixes may be quite unpredictable. As for categorialness, there are derivational processes which are very productive, e.g. the suffix *-able* can be attached to almost any transitive verb to form an adjective.

The hypothesis that VNs are not a homogenous category, but rather a set of forms which are the product of both derivational and inflectional processes, does not seem unfounded. The fact that there are forms which exhibit verbal government, together with the categorialness of VN formation, speak in favour of an inflectional analysis. The fact that there are forms which exhibit nominal government, the fact that VNs can be inflected for the genitive case, the multiplicity of formatives, and the existence of gaps, all point to derivation as the driving force behind the process of VN formation.

The VN in the progressive construction appears to be a derivational category realising a particular morphosyntactic function. The analysis of this category is a challenging task, since it is inflection that is concerned with the structure of

grammatical words, i.e. it deals with the bound realisation of morphosyntactic features, whereas derivation is supposed to deal with the internal structure of major lexical categories. Anderson (1982: 587) declares that 'inflectional morphology is what is relevant to the syntax'. VNs in the progressive seem to be an instance of derivational morphology relevant to the syntax, which looks like a contradiction in terms. However, cases of word-class-changing derivation motivated by syntactic requirements have been reported elsewhere (cf. Aronoff 1994: 124-130, van Marle 1996, Booij 2000: 365). To bring VNs in the progressive into line with the Andersonian definition we need to show that they are inflectional, that they are non-finite verb forms. In order to achieve this, we need to account for three things: firstly, why the following NP is in the genitive case, secondly, how come that VNs may be inflected for the genitive case and thirdly, why some VNs lack verbal sources. This is precisely what we will proceed to do. In the first subsection that follows (2.2.) we discuss the syntax of non-finite clauses and argue that VNs employed in these structures should be treated uniformly as inflectional forms of verbs, in the second (2.3.) we examine the ostensible inflection of VNs (cf. Bloch-Trojnar 2003), and in the third (2.4.) we concentrate on the gaps in their formation.[18]

2.2. VNs in the progressive

The syntax of Irish VNs is fairly complicated. However, a convincing analysis is available in McCloskey (1980, 1983). We start by presenting his representations of VNs in infinitival and progressive constructions. Then, we discuss his reasons for a uniform treatment and produce some more evidence for this stand.

McCloskey (1980) subjects to closer scrutiny infinitival complementation and argues that sequences N + a^{L} + VN have the status of syntactic constituents and that the constituent in question is a clause. The representations below illustrate the structure of infinitives with transitive[19] (22a) and intransitive verbs (22b):

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[18] A thorough analysis of VNs in the progressive as presented in the following sections has led to a revision of my earlier explanations as given in Bloch-Trojnar (2004).

[19] McCloskey postulates a transformation of Infinitive Postposing. This rule moves the non-finite verb to the right without affecting the constituency of the clause in which it operates.

(22)

a.   *i leith   na daoine   a   leanstan*
    in favour the people-gen. PRT pursue-VN
    'in favour of pursuing the people'

```
                        PP
              ┌─────────┴─────────┐
            Prep                   S
             △                  [– fin]
                              ┌────┴────┐
           i leith            V          NP
                           [– fin]        △
                           ┌──┐
                          a   VN       na daoine
                               │
                            leanstan
```
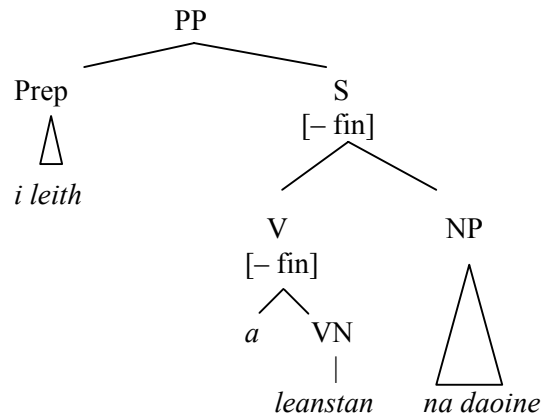
b.   *Bhéarfadh sé orthu   éisteacht leis.*
    would-catch he upon-them listen-VN with-him
    'He would catch (get hold of) them to listen to him.'

```
                            S
                         [+ fin]
         ┌──────┬──────┬──────────────────┐
         V      NP     PP                  S
      [+ fin]                           [– fin]
         │      │      │              ┌─────┴─────┐
     Bhéarfadh  sé    orthu           V           PP
                                   [– fin]
                                      │            │
                                     VN           leis
                                      │
                                  éisteacht
```
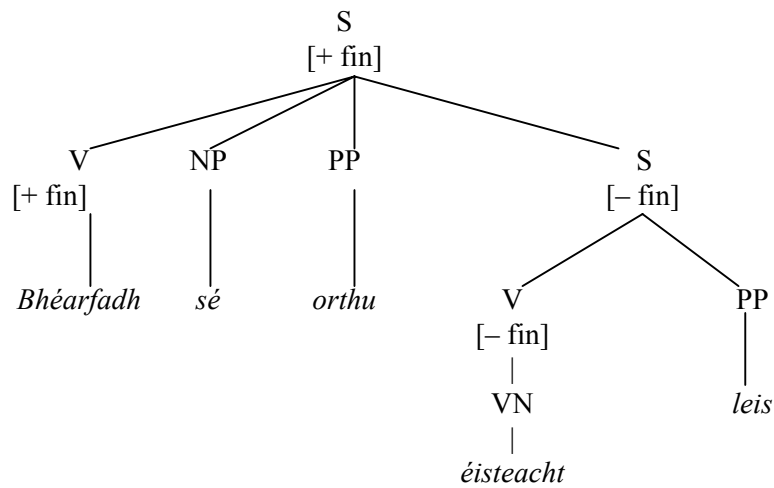
It is evident from the representations above that VNs in subjectless infinitival complements have verbal status.

McCloskey (1983) concentrates solely on the progressive construction. He applies various syntactic tests for constituenthood and concludes that the particle and the VN form a unit. We must recognise a constituent including everything but the verb *tá* 'be' and its subject – *ag* VN (Object)(PP)(Adv), because among other things:

1. this constituent can appear in the focus position of a cleft sentence

(23) [*ag magadh   orm*] *a   bheadh   an mhór-chuid acu*
     PRT mock-VN on-me COMP would-be   most-of   them
     'It is mocking me that most of them would be.'

  2. it occurs in the complement position of certain verbs, e.g. *caith* 'spend', verbs of perception

(24) *Chaith mé dhá bhliain* [*ag scríobh gearr-scéaltaí.*]
     spent   I   two   year   PRT write-VN short stories
     'I spent two years writing short stories.'

  3. it can be used as an adjunct

(25) *D'imigh siad uaidh*   [*ag gáirí.*]
     left   they from-him PRT laugh-VN
     'They went away from him laughing.'

McCloskey argues that the phrase involved in the progressive construction is most plausibly analysed as a surface VP. The ProgP is a verbal category, a maximal projection of V. Its head is the 0-level category V which dominates both the particle *ag* and the VN which follows it, as depicted below:

(26)   *ag tógáil   tithe   i nDoire*
     PRT build-VN house-gen.pl in Derry
     'building houses in Derry'

```
                        VP
                      [– FIN
                      + PROG]
                     /        \
              V'                 Adv
            [– FIN                |
            + PROG]               PP
           /       \            /    \
        V            NP        P       NP
      [– FIN          △        |        △
      + PROG]        tithe     i      nDoire
      /     \
    ag       VN
             |
           tógáil
```
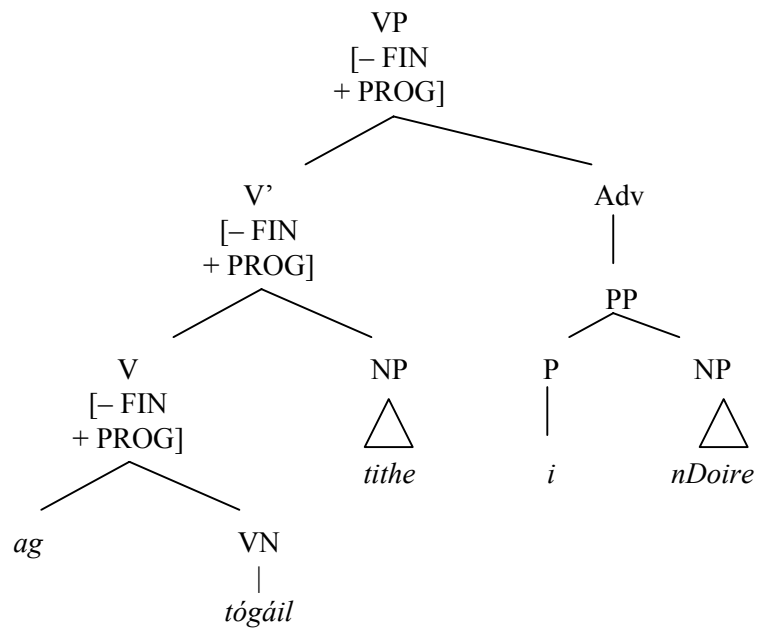
McCloskey claims that the ProgP has the properties of non-finite verbs. He advocates the existence of a class of WFRs which construct various kinds of non-finite verbs from VNs by prefixing to them various particles creating structures under the 0-level node V.

(27)
```
                    V
                  [– fin]
                 /       \
          Particle        VN
```
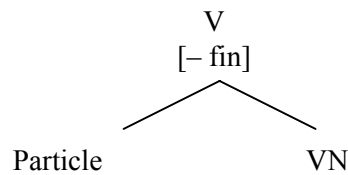
VNs are an analysable category, i.e. a subcategory of N, a subcategory defined by some arbitrary feature [+ DEV] meaning deverbal, so that the following equation will hold:

(28)
$$VN = \begin{Bmatrix} + N \\ - V \\ + DEV \end{Bmatrix}$$

Since VN is [+ N, – V] it will appear in all positions in which N appears, and the feature [+ DEV] will block the appearance of 'ordinary' nouns in the

function of non-finite verbs; Since the dominating node is V, the whole complex will be predicted correctly to have the distribution of a verb. Bare VNs are nominal in character. The complex of which they form a part is clearly verbal.

In brief: for McCloskey VNs are a homogenous derivational category which is the input to rules forming various kinds of non-finite forms. This is evident when we juxtapose the representation of the infinitive with the representation of the progressive:

(29)

a.   b.

       V   V
    [− FIN]   [− FIN
                                    +PROG]

a   VN   *ag*   VN
                 | |
         leanstan   *tógáil*
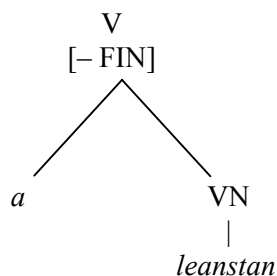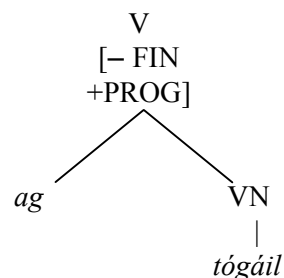
As we have just seen, McCloskey would wish to treat VNs as verbal entities and it is mostly the identity of surface form that enforces uniform treatment. However, is there any empirical evidence for this stance? A major stumbling block in treating VNs as verbal entities is the genitive marking on the complement, which is a feature of NP dependents.

McCloskey notes, however, that the ProgP cannot be an instance of a NP as it has a totally different distribution. NPs cannot appear after *tá*, on the other hand, the ProgP cannot function as the object of a preposition. He overcomes the problem of the genitive marking by claiming that it can be attributed to variation in register – 'pedagogic grammars normally require that the direct object of the progressive verb be in the genitive case. This rule is observed by more conservative speakers, and in more formal registers, but is commonly ignored in normal colloquial usage' (McCloskey 1983: 13).

Another way that we can demonstrate that the VN in the progressive is verbal, i.e. resembles VNs used in infinitival clauses, is by pointing to similarities in the syntactic behaviour of the two constructions. Firstly, the NP object in progressives is not always in the genitive case. Secondly, genitive marking may sometimes accompany infinitives. Thirdly, *ag* may sometimes be replaced with the particle *a* used in infinitival clauses.

Genitive marking is not observed when the object noun is preposed to make it an antecedent of a relative clause (30b), or when the object of the VN is

moved in interrogative clauses (31b). When the object is separated from the VN it is in the accusative and the particle *ag* is replaced by *a* and causes lenition of the following VN. The first example comes from Ó Sé (2000: 364-368):

(30)
a.   *Bhí sé **ag** déanamh **na hoibre**.*
       was he PRT do-VN   the work-gen.
       'He was doing the work.'

b.   ***An obair**   a bhí sé   **a**   dhéanamh.*
       the work-acc. that was he PRT do-VN
       'the work that he was doing'

(31)
a.   *Táimid **ag** tógáil   tí.*
       we-are   PRT build-VN house-gen.
       'We are building a house.'

b.   ***Cén**   teach atá sibh **a**   thógáil?*
       which house are   you   PRT build-VN
       'Which house are you building?'

   When in a dependent infinitival clause both the subject and object are present the object may either follow the usual pattern, i.e. precede the infinitive or it may follow, in which case it occurs in the genitive case. Consider the following sentences, where the last two are variants:

(32)   *Ba   mhaith liom   an leabhar a léamh.*
        would be good   with-me the book-acc. PRT read-VN
        'I would like to read the book.'

(33)
a.   *Ba   mhaith liom   Seán   **an leabhar a léamh**.*
       would-be good with-me Sean   the book-acc.   PRT read-VN
       'I would like Sean to read the book.'

b.   *Ba   mhaith liom   Seán **a   léamh   an leabhair**.*
       would-be good with-me Sean   PRT read-VN the book-gen.
       'I would like Sean to read the book.'

Once again, we see that the object does not have to be in the genitive.

Furthermore, *ag* is also replaced by *a*^{L} in aspectual sentences. The NP object follows the VN and is in the genitive case.

(34)   *Thosaigh sé a   ghlanadh an tí.*
          started   he PRT clean-VN the house-gen.
          'He started cleaning the house.'

In other words, the presence of the genitive is not dependent on the progressive nature of the clause.

Finally, no trace of nominal morphology can be observed in the case of intransitive verbs in the progressive.

(35)   *Tá Seán ag rith.*
          is   Sean PRT run-VN
          'Sean is running.'

The examples above point to a considerable affinity between the VNs in the infinitive and progressive construction. In certain constructions the usual contrast in the positioning and case marking of the object NP may be suspended without affecting the grammaticality of sentences. The fact that genitive case marking occurs on the NP in the progressive construction does not necessarily prove that the head of the ProgP is a noun. This may be a case of verbal government (cf. Doyle 2002: 102-103). We can observe a case of trade off between morphology and syntax. The present participle in the ProgP and the infinitive are morphologically identical so they must be disambiguated on the syntactic level. This is achieved by means of word order and the genitive case on the object in the progressive.

Similarly, in Polish, verbs which govern the accusative case of their object require the genitive case in negated sentences. It would be preposterous to claim that in negative sentences verbs cease to be verbs and turn into nouns.

(36)
a.   *Lubię koty.*
          like-1st person sg. cat-**acc**.pl.
          'I like cats.'

b.   *Nie lubię kotów.*
          NEG like-1st person sg. cat-**gen**.pl.
          'I don't like cats.'

All in all, it seems plausible to regard VNs uniformly as inflectional forms of verbs, but for different reasons from those put forward by McCloskey. McCloskey's morphological rules deriving non-finite verb forms from nouns are unusual. Firstly, they fly in the face of the Free Analog Test put forward by Beard (1995: 102) to distinguish between inflectional and derivational categories. According to this test 'L-derivation rules (…) are never marked by free morphemes but only by bound ones, because the lexicon, where L-derivation takes place, cannot generate syntactic structure for its category functions. (…) any category marked by a free morpheme must be a syntactic hence inflectional category'. The grammatical function of the present participle in Irish is jointly discharged by the particle and the VN. Present participles involve a free morpheme, hence, they fall into the realm of inflectional morphology dependent on syntax.

Furthermore, it seems counterintuitive to form nouns from verbs and then turn them into non-finite forms of verbs. This may have been the diachronic development, but synchronically there is no need to bind infinitives and present participles (as in the progressive construction) with VNs in this way.[20] They can

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[20] In her diachronic study of the infinitive in Indo-European, Disterheft (1980) strives to indentify the mechanism of change which enabled the nominal verbal abstract to fulfil the function of the infinitive and which was ultimately responsible for the association thereof with the verbal system. The latter development is paired with morphological reconstructuring, i.e. the reduction of Proto-Indo-European forms to one. The uncommon retention of more than one form is characteristic not only of Celtic, but also of Hittite and Indo-Iranian. She concludes that in Old Irish the verbal noun is still part of nominal paradigms and the aforementioned shift has not even started. Despite infinitival properties of VNs some linguists concluded that Old Irish and Modern Irish lack any infinitival category per se due to the fact that VNs are established as action nouns and on account of word order in Celtic, which is the only Indo-European subgroup to have developed verb-first order (Dillon 1955: 112f). Those who share those doubts and persist in confusing nominal and verbal categories encoded by VNs because of their surface identity are referred to for example Gagnepaine (1963) who carried out an in-depth analysis of the verbal noun in Irish spanning the period from Old through Middle to Modern Irish. He concludes:

'On a longtemps nié que le celtique en eût possédé un. Or on peut, sans même anticiper sur les conclusions de l'étude parallèle que nous pensons, dans un proche avenir, consacrer au brittonique, affirmer non seulement que tel n'est plus, en tout cas, la situation aujourd'hui, mais que, de tout temps, une espèce s'est trouvée, quelle que soit la diversité de ses marques, fonctionnellement différenciée comme tel. (…) s'il est faux de parler d' *infinitif* en soi, il ne l'est pas moins de nier son existence, comme on l'a fait en celtique par exemple, sous prétexte que, dans une langue donnée, on ne retrouve rien de ce que nos habitudes gréco-latines nous ont appris à concevoir comme tel' (Gagnepaine 1963: 338-340).

be directly formed from corresponding verbs by rules of inflection. Szymanek (1988: 34-37) demonstrates that the systematic relation holding between lexical verbs and their transpositional nominalisations is not symmetrical, i.e. 'languages possess elaborate morphology to convert verbal roots into nouns but no morphology whose sole function is to convert nouns into verbs. The shift from V to N is more prototypical than vice versa'.

(37)   DENOMINAL VERBS

NOMINALISATIONS

Therefore, forming infinitives from nominalisations to account for identity of form is less plausible than the opposite direction. Previous research (McCloskey 1980, 1983, Ó Siadhail 1989, Ó Sé 2000) on the Irish data is based on the assumption that phonological form and its grammatical or lexical content are inseparable. We get a clearer picture if we study the functional aspect independently of its phonological realisation, as proposed by Beard, because we are not forced to formally connect nominalisations and inflectional forms of verbs. Verbs serve as the base for the formation of nominalisations. The same verbal bases are subject to rules of inflection, which form infinitives and present participles. Nominalisations and non-finite forms are not functionally related, i.e.

'It has long been contradicted that Celtic possesses that form (i.e. the infinitive). We can say, without anticipating the conclusions of a parallel analysis we are going to carry out in the future on Breton, that the situation today is different, and that such autonomous functional entity has always existed, its diverse properties notwithstanding. (…) If it is false to speak of the infinitive per se, it is equally false to negate its existence, as has been done for example in Celtic, only due to the fact that we fail to find something in a given language, because our thinking is biased by Greek-Latin patterns' [translation mine M. B.-T.].

Doyle (2002: 103), whose syntactic analysis is carried out within the Minimalist Program, also insists on breaking with a mistaken tradition – 'it would be highly desirable to replace the term VN with infinitive altogether, as part of the confusion arises from the very nomenclature involved'. McCloskey's proposal to derive non-finite verb forms from abstract nominals is reminiscent of the treatment of morphophonemics in Generative Phonology. Rules deriving morphophonemic alternations from underlying representations frequently recapture historical processes and have little psychological reality (cf. Gussmann 1992, 2000).

non-finite verb forms are not derived from nominalisations, or vice versa. They merely coincide in surface form. In the progressive we have to do with a non-finite verb form from the start.

(38)   verbal bases

nominalisations   non-finite forms

morphophonological
exponents
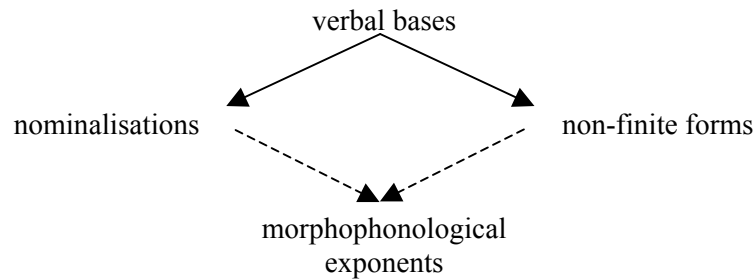
The particle *ag* is not a defining characteristic of the progressive phrase, as we have seen, it can be replaced by the leniting particle *a*. Therefore, the feature [+ prog] cannot be associated only with the particle. This suggests that in addition to the lexical meaning carried by the root/stem, the verb must encode distinctions in non-finite categories. The VN in the progressive is equipped with verbal lexical features, i.e. Verb Class and Transitivity and the feature [+ prog]. The presence of this feature imposes genitive marking on NP complements which follow the VN. Infinitives, in contrast, are equipped only with verbal lexical features. Hence, their complement is not in the genitive.

Summing up our discussion in this subsection, we can say that VNs in both progressive and infinitive are verbs and are part and parcel of the inflectional system. The inflectional processes responsible for their formation are mapped onto the same set of morphophonological exponents. Each form will be deciphered on the basis of the specific syntactic context in which it occurs. There are three means of differentiation: case marking of the complement, the presence of the particle, and complement positioning. We shall now turn to examine the notion of VN inflection more closely.

2.3. The genitive of the VN

It is generally accepted that inflectional affixes are category preserving, whereas derivational affixation may result in category change. Greenberg (1966: 93) puts it as follows – 'where both derivational and inflectional elements are found together, the derivational element is more intimately connected with the root'. If we accept the fact that derivational rules precede inflectional rules one consequence follows – an inflected form cannot undergo further inflection whereas a derived form, i.e. a new lexeme can. If we regard a given process as

derivational, the existence of a derivational suffix presupposes the existence of an inflectional paradigm. If we take the verbal base *play* it accepts verbal inflections and we come up with the following word forms: *plays*, *playing*, *played*. The inflectional formatives *-s*, *-ing*, *-ed* block the addition of anything else. If the same base is subject to a derivational process and we derive a new lexeme, e.g. *player*, the derivational suffix *-er* does not block the addition of nominal inflectional markers – *players*, *player's*, *players'*.

According to this criterion, Irish VNs seem to be derivational because they can be inflected for the genitive case. If we want to argue that VNs are inflectional, we need to demonstrate that what is traditionally regarded as the genitive case of VNs is not, in fact, a case ending. The grammatical description of the phenomenon in question is based on de Bhaldraithe (1953) and Ó hAnluain (1999).

2.3.1. The formation of the genitive of the VN

Generally speaking, the 'so called' genitive case of the VN is hardly used at present, except for masculine nouns which terminate in a broad consonant and feminine nouns which end in *-áil*. However, in other cases it is potentially derivable. The genitive case of the VN is either the same in form as the verbal adjective (henceforth VA), or it is formed in accordance with one of the five declensions. There are also VNs which have both forms. At this point we need to make one reservation. We have already seen that traditional grammars use the same term for what clearly are nominal forms and verbal forms. Nominalisations, being nouns, will take case endings in accordance with the declension they belong to. With verbal VNs (present participles), the so-called genitive is identical in form to the VA, as can be seen below:

(39)   **Nominal genitive:**   *lucht óil*
                         people drink-gen.
                         'drunkards'

         Participle genitive: *lucht   ólta   tobac*
                         people smoke-VN-gen. tobacco
                         'smokers'

         Verbal Adjective: *Tá an tae ólta.*
                         is the tea drink-PPRT
                         'The tea has been drunk.'

What we are interested in are those genitive forms which are the same as the VA. As in the majority of cases the genitive of the VN is the same as the VA, it is useful to start our presentation with a description of how the latter is formed and used.

The VA is the traditional term used for the past participle. Consider the examples below:

(40)

a.   *Tá an fhuinneog briste.*
      is the window   break-PPRT
      'The window is broken.'

b.   *Bhí an fhuinneog briste.*
      was the window   break-PPRT
      'The window was broken.'

c.   *Beidh an dochar déanta.*
      will-be the harm   do-PPRT
      'The harm will be done.'

d.   *Tá sé críochnaithe.*
      is   it finish-PPRT
      'It is finished.'

Participles, apart from combining with verbs, may be used like adjectives. They may be used predicatively and attributively. Predicatively, they often appear with the copula:

(41)   *Is dóite an blas atá air.*   'It has a bitter/burning taste.'
       Is tollta an lá é.   'It's a piercing day.'
       Is céasta an scéal é.   'It's a tormenting/miserable story.'
       Is caillte an uair í.   'It is a dreadful time.'

VAs may also modify nouns:

(42)   *balla briste*   'broken wall'
       aimsir bhriste   'broken weather'
       margadh déanta   'completed bargain'
       amadán críochnaithe   '(finished) utter fool'

First conjugation verbs form their VAs by the addition of the suffix *-ta* [tə] (after a velarised consonant) or *-te* [t′i] (after a palatalised consonant) to the root, e.g. *glan* 'clean' – *glanta* (VA), *bris* 'break' – *briste* (VA). The final consonant of verbs ending in *-igh* [g′] is dropped before the suffix, e.g. *nigh* 'wash' – *nite* (VA), *crúigh* 'milk' – *crúite* (VA). Verbs which end in labial consonants [p, b, m, v], velar stops [k, g], and [r], take the variants *-tha* [hə] / *-the* [hi] of the suffix, e.g. *ceap* 'think' – *ceaptha* (VA), *tuig* 'understand' – *tuigthe* (VA), *gearr* 'cut' – *gearrtha* (VA). Second conjugation verbs ending in [g′] drop the final consonant and take the ending *-the* [hə], e.g. *ceannaigh* 'buy' – *ceannaithe* (VA), *imigh* 'go' – *imithe* (VA). The remaining verbs of this conjugation take the ending *-ta* or *-te* unless the stem terminates in [p, b, m, v, k, g, r], in which case the variants *-tha*/*-the* are selected, e.g. *oscail* 'open' – *oscailte* (VA), *foghlaim* 'learn' – *foghlamtha* (VA). The formation of the VA of some 2nd conjugation verbs requires depalatalisation of the final consonant, e.g. *aithin* 'know' – *aitheanta* (VA), *freagair* 'answer' – *freagartha* (VA) or *foghlaim* 'learn' – *foghlamtha* (VA). The rules are summarised in the table below.

(43)	Subtract *-gh* , *-th* and add	If the stem ends in [p, b, m, v, k, g, r] add	Add to the stem
1st conjugation	**-te** *nigh – nite* 'wash'	**-tha, -the** *ceap – ceaptha* 'think'	**-ta, -te** *glan – glanta,* 'clean'
2nd conjugation	**-the** *ceannaigh – ceannaithe* 'buy'	**-tha, -the** *foghlaim – foghlamtha* 'learn'	**-ta, -te** *oscail – oscailte* 'open'

We will now examine cases in which the VN genitive equals the VA. The form of the VN is the same as that of the VA in the following cases:

(44)
– when the VN ends in *-(e)adh*

a.   *cáineadh* 'fine-VN'   –   *cáinte* 'fine VN-gen./VA'
      moladh 'praise-VN'   –   *molta* 'praise VN-gen./VA'
      bearradh 'cut-VN'   –   *bearrtha* 'cut VN-gen./VA'
      folcadh 'bathe-VN'   –   *folctha* 'bathe VN-gen./VA'

– when the VN ends in a vowel

b. *éalú* 'escape-VN'   – *éalaithe* 'escape VN-gen./VA'
    ionsaí 'attack-VN'   – *ionsaithe* 'attack VN-gen./VA'
    sú 'absorb-VN'   – *súite* 'absorb VN-gen./VA'
    dó 'burn-VN'   – *dóite* 'burn VN-gen./VA'
    cónaí 'dwell-VN'   – *cónaithe* 'dwell VN-gen./VA'

– when the VN ends in a broad consonant

c. *coimeád* 'keep-VN'   – *coimeádta* 'keep VN-gen./VA'
    scríobh 'write-VN'   – *scríofa* 'write VN-gen./VA'
    tóch 'dig-VN'   – *tóchta* 'dig VN-gen./VA'

– when the VN ends in *-ilt*, *-in(g)t* and *-irt* (but not *-áint*, *-úint*)

d. *baint* 'reap-VN'   – *bainte* 'reap VN-gen./VA'
    meilt 'grind-VN'   – *meilte* 'grind VN-gen./VA'
    cuimilt 'rub-VN'   – *cuimilte* 'rub VN-gen./VA'
    cosaint 'protect-VN'   – *cosanta* 'protect VN-gen./VA'
    bagairt 'threaten-VN'   – *bagartha* 'threaten VN-gen./VA'

In some of these cases we observe depalatalisation. Certain forms have to be marked for this. We are unable to predict why the VA/genitive form of *labhairt* 'speak-VN' is *labhartha* and not **labhairthe*. What matters is the fact that the genitive form always equals that of the VA.

(45)

Verb	**VN**	**VN-gen. = VA**
ceil 'conceal'	ceilt	ceilte
coigil 'spare'	coigilt	coigilte
deighil 'separate'	deighilt	deighilte
eitil 'fly'	eitilt	eitilte
bain 'extract'	baint	bainte
roinn 'divide'	roinnt	roinnte
tarraing 'pull'	tarraingt	tarraingt(h)e
tuirling 'descend'	tuirlingt	tuirlingt(h)e

(46)

Verb	VN	VN-gen. depalatalisation
cogain 'chew'	cogaint	coganta
seachain 'avoid'	seachaint	seachanta
agair 'plead'	agairt	agartha
bagair 'brandish'	bagairt	bagartha
coscair 'mangle'	coscairt	coscartha
díbir 'expel'	díbirt	díbeartha
eascair 'spring'	eascairt	eascartha
fógair 'declare'	fógairt	fógartha
freagair 'answer'	freagairt	freagartha
íobair 'sacrifice'	íobairt	íobartha
labhair 'speak'	labhairt	labhartha
treascair 'knock down'	treascairt	treascartha

If we have a closer look at the forms in question we shall see that no alternation occurs if the verb terminates in [lʹ ŋʹ], and in [nʹ] in monosyllabic forms. Depalatalisation takes place when word-final [rʹ] and [nʹ] occurs in disyllabic verbs. Depalatalisation, by and large, hinges on the conjugation class to which the verb belongs. If it is a second conjugation verb like *seachain* 'avoid' we have depalatalisation, if it is a first conjugation verb like *ceil* 'conceal' the quality of the final consonant is not affected.[21]

To sum up: the genitive form of the VN is the same as that of the VA in the case of VNs which are formed by the addition of a vowel (*mol*, *dóigh*) or [tʹ] (*ceil*, *bagair*), and where a zero morpheme is added to bases terminating in a broad consonant (*tóch*).

The remaining verbal nouns are declined either in accordance with one of the five declensions or have two forms: the genitive formed like that of ordinary nouns, and the genitive form which is the same as the verbal adjective.

The equation of the VN genitive and the VA does not always hold. The genitive case of VNs in *-áil* does not equal the VA, but is formed by the addition of depalatalising *-a*, e.g.

(47)   *pábháil* 'pave' (VN)   *pábhála* (VN-gen.)   *pábháilte* (VA)

---

[21] *coigil* 'spare', *eitil* 'fly', *tarraing* 'pull' and *tuirling* 'descend' are 2ⁿᵈ conjugation verbs, and yet do not show depalatalisation. We may either regard such forms as exceptional or we may assume that depalatalisation depends on the number of syllables and the quality of the consonant which comes last in the verbal root.

These forms are more like 3rd declension nouns, whose genitive form is built by the addition of the same formative *-a*. When the VN genitive is followed by an object it is distinct from the VA, e.g.

(48)   *fear pábhála   sráide*   vs. *sráid phábháilte*
            man pave-VN-gen. street-gen.pl.   street pave-VA
            'a man paving streets'   'paved street'

Also, in some dialects older 'irregular' VAs tend to be replaced by new regular formations, but the genitive form remains intact. For example older *scríofa* gives way to new *scríobhta* (Ó Siadhail 1989: 200):

(49)   *scríobh* 'write'(VN)   *scríofa* (VN-gen.)   *scríobhta* (VA)

This suggests that the VN genitive and VA are categorially distinct, but usually there is only one surface form available for a given verbal base.

2.3.2. The category of the VN genitive

We can see that the formation of the VN genitive is not very complicated and involves relatively few exceptions. The ending depends on the conjugation to which the base verb belongs. Now if we are dealing with case endings, this is strange. Case endings usually depend on noun class, and are unconnected with verbal conjugations. In other words, it looks as if we are not dealing with nouns at all, but with inflectional forms of verbs.

The genitive form of the VN is usually the same as that of the VA if the VN occurs together with an object (a noun or a possessive pronoun). It is not often used. Earlier examples are repeated for convenience and new ones have been added:

(50)   *lucht ólta   poitín*
            people drink-VN-gen. whisky-gen.
            'people drinking home-distilled whisky'

            Tá an coirce in alt   a bhainte.
            is the oats   ready for its reap-VN-gen.
            'The oats are ready for reaping.'

fear ceannaithe   bó
man buy-VN-gen. cow-gen.pl.
'a man buying cows / cattle-dealer'

fear inste   scéil
man tell-VN-gen. story-gen.
'a man telling stories / story teller'

fear siúlta   an   róid
man walk-VN-gen. the road-gen.
'a man who walks the roads / itinerant'

bó   tálta   bainne
cow yield-VN-gen. milk-gen.
'a cow yielding milk / milch cow'

Tá deis a labhartha   aige.
is right his say-VN-gen. at-him
'He speaks well / has a happy knack of saying the right things.'

thar éis a bhainte
after   its cut-VN-gen.
'after cutting it / after it has been reaped'

in am   a   bhearrtha
in time his   shave-VN-gen.
'when he was old enough to shave'

The object is obligatory in such constructions when the verb is transitive:

(51)   *lucht ólta poitín ≠ lucht ólta*

If the object is not expressed the genitive would be analysed as a past participle. *lucht ólta* does not mean 'people who drink' but 'people who are drunk'.

We do come across examples of a noun followed by the genitive of a transitive VN, without any complement, e.g. *fataí spréite* 'potatoes bursting their jackets/bursting potatoes'. However, one must treat such phrases with caution. *mol* 'praise' is normally transitive. In *focal molta* 'word of praise' we are dealing with a nominalisation – *moladh* 'praise$_N$' – *molta* (gen.). In *cuntas scríofa*

'written account', we simply have a VA used attributively. Other examples where we are dealing with a bare nominalisation in the genitive include:

(52)

Verb	Nominalisation	Nominalisation in the genitive
cáin 'censure'	*cáineadh* 'censure'	*rún cáinte* 'vote of censure'
folc 'bathe'	*folcadh* 'bath(ing)'	*dabhach folctha* 'bath-tub'
croch 'hang'	*crochadh* 'hanging'	*coir chrochta* 'hanging offence'
bearr 'cut'	*bearradh* 'cutting'	*scian bearrtha* 'cutting knife'
éalaigh 'escape'	*éalú* 'ecape'	*bealach éalaithe* 'escape route'
ionsaigh 'attack'	*ionsaí* 'attack'	*lucht ionsaithe* 'attackers, assailants'
súigh 'absorb'	*sú* 'absorbing'	*páipéar súite* 'blotting-paper'
dóigh 'burn'	*dó* 'burning'	*boladh dóite* 'smell of burning'
cosain 'protect'	*cosaint* 'protection'	*gléas cosanta* 'protecting equipment'
bagair 'brandish'	*bagairt* 'threat'	*lá bagartha* 'threatening day'

For these verbs the morphological distinction between VN genitive and the genitive of nominalisations is suspended. Unlike *ól*, there is no separate declensional pattern for the genitive of the nominalisation.

The semantics usually makes it fairly easy to distinguish when we are dealing with VAs:

(53)   *fear déanta* 'fully-grown, well-developed man'
        ball críochnaithe 'finished article'
        intinn chráite 'tortured mind'
        cuma ghlanta 'clean look'

In the light of the striking regularity of form and predictability of meaning, we would like to suggest that what is traditionally termed the genitive of the VN is an active participle used in adjectival positions. There is also a passive participle (VA) of the same form, used in the same context, i.e. to postmodify a noun. Finally, the genitive case of nominalisations sometimes is identical to the active participle. Syntactically, the presence of a complement NP after the genitive enables us to identify a given object as an active participle.

There are two more pieces of evidence which lend support to the analysis of VN genitives as contextual variants of active participles, i.e. active participles used in adjectival positions. First of all, the construction with a following NP is equivalent to a construction with an infinitive:

(54) *lucht ólta   poitín*   =   *lucht poitín   a   ól*
     people drink-VN-gen. whisky-gen.   people whisky-acc. PRT drink-VN
     'people drinking whisky'   'people drinking whisky'

The fact that the 'genitive' of the VN requires an object points to its verbal nature. It also preserves the subcategorisation frame of a corresponding verb. A nominal genitive can never be followed by an object:

(55) *lucht óil*   vs. **lucht óil poitín*
     people drink-gen.   people drink-gen. whisky
     'people of drink / drunkards'

Secondly, genitive forms of VNs are employed in the same contexts where one would not employ the genitive case of ordinary nouns. Ordinary nouns appear in the common form instead of the genitive when they govern a definite noun in the genitive. In the phrase:

(56) *cóta   mhac   Sheáin*   Cf. **cóta   mic   Sheáin*
     coat-nom. son-com. Sean-gen.   coat-nom. son-gen. Sean-gen.
     'Sean's son's coat'

the noun *mac* is said to be common in form and genitive in function. The genitive form of *mac* 'son' is *mic* 'son-gen.'. This rule, however, does not apply to VNs, e.g.

(57) *lucht foghlamtha na Gaeilge*   Cf. **lucht fhoghlaim na Gaeilge.*
     people learn-VN-gen. the Irish-gen.   people learn-VN-com. the Irish-gen.
     'people learning Irish /
     learners of Irish'

The verbal noun appears in the genitive case. If it was a noun we would expect the common form *foghlaim*.

To sum up: what traditional grammarians regard as the genitive case of the VN is in fact a participle used to modify nouns. This conclusion results from the fact that it is formed from verbal bases, it is often followed by an object NP like the verb in a corresponding clause, it has an equivalent construction with an infinitive, and it does not behave like an ordinary noun when followed by another noun phrase. The present participle is used to postmodify a noun – it is equivalent to the active adjectival participle of English. We summarise the findings of this section in the table below:

(58)

Verb		
VN **(present participle)**	*Tá siad ag **ól** poitín.* are they PRT drink-VN whisky 'They are drinking whisky.'	*Tá sí ag **crú** na mbó.* is she PRT milk-VN the cows-gen. 'She is milking the cows.'
Verbal Adjective (PPRT)	*Tá an tae **ólta**.* is the tea drink-PPRT 'The tea has been drunk.'	*Tá na ba **crúite** aici.* are the cows milk-PPRT at-her 'She has milked the cows.'
Adjectival Participle	*lucht **ólta** poitín* people drink-VN whisky-gen. 'people drinking whisky / whisky drinkers'	*cailín deas **crúite** na mbó* girl nice milk-VN the cows-gen. 'a nice girl milking cows / milkmaid'
Noun		
Nominalisation	*an t-**ól*** the drink-VN 'the drink'	***crú*** milk-VN '(act of) milking, a yield of milk'
Genitive	*braon **óil*** drop drink-VN-gen. 'a drop of drink'	*inneall **crúite*** machine milk-VN-gen. 'milking machine'

Summing up, in this section we have debunked yet another argument against treating VNs in the progressive as non-finite verb forms.

2.4. Distributional gaps

Szymanek (1988: 20) bases his definition of an inflectional category on Grzegorczykowa *et al.* (1984: 24). An inflectional category is 'a set of all functional classes, each of which enters into a direct morphological opposition with respect to all the remaining functional classes which belong to this set'. For the category of Number, one might posit two functional classes. Class A: *cup*, *spoon*, *knife* (countable nouns) would be in direct morphological opposition to Class B: *cups*, *spoons*, *knives*.

(59)

INFLECTIONAL CATEGORY
C = Number

Class A: Noun Sing. cup spoon knife ox man	→ ←	Class B: Noun Pl. cups spoons knives oxen men

→ A implies B
← B implies A
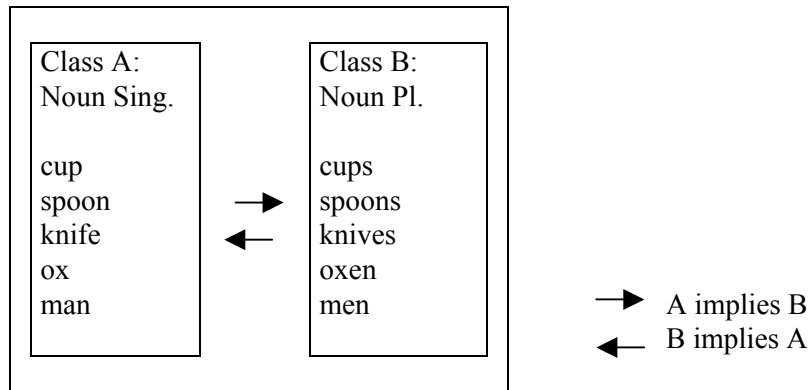
A derivational category is defined as a single functional class of lexemes whose exemplars consist, minimally, of a base and a derivational formative. There may be more than one formative element spelling out a particular derivational category. However, it must be uniquely specifiable and constant in terms of its basic function (meaning).

(60)   DERIVATIONAL CATEGORY
C = Agent Noun

Class A: Verb paint inform escape cook …. steal open	← ---- ►	Class B: Agent Noun painter informant escapee cook Ø

* stealer
* opener

← B implies A
---- ► A motivates B
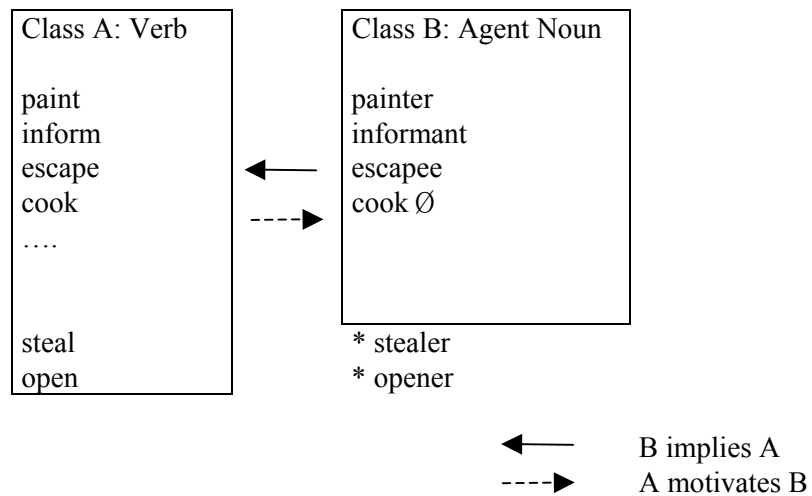
There is a relation between a derivational category C, expressed as a class B, to the corresponding class A base forms. The class of derivatives B implies a corresponding class of base forms A. However, the relation between A and B is that of motivation (foundation), i.e. only some members of class A motivate the complex lexemes from class B (e.g. some verbs have no corresponding agentive nominalisations).

Let us now see how our assumptions about VNs could be accommodated in this model. Firstly, we postulate an inflectional category – the infinitive. We have two classes. Class A consists of verbal roots/stems. Class B: comprises non-finite verb forms, i.e. infinitives.

(61)

<div align="center">

INFLECTIONAL CATEGORY
C = infintive

</div>

Class A: verbal root/stem	Class B: infinitive
déan 'do' buail 'hit' bí 'be' feic 'see' clois 'hear'	déanamh bualadh bheith feiceáil cloisint

→ A implies B
← B implies A
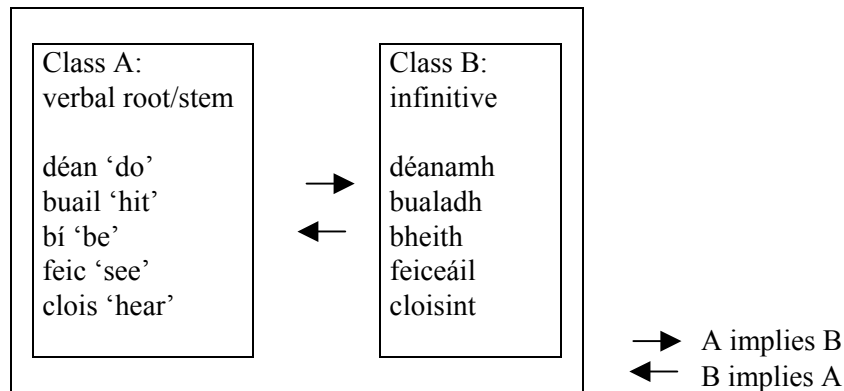
Every verb has a corresponding infinitive: action verbs like *déan* or *buail*, the substantive verb *bí*, and verbs of perception like *feic* or *clois*. Every infinitive has a corresponding verb.

Now let us examine the formation of VNs which appear in the progressive construction. Should they be regarded as derivational?

(62)

? DERIVATIONAL CATEGORY
C = Verbal Noun

Class A: Verbal root	Class B: Verbal Noun
déan 'do'	ag déanamh
buail 'hit'	ag bualadh
*	ag bádóireacht 'boating'
*	ag magadh 'mocking'
*	ag obair 'working'
bí 'be'	*ag bheith
feic 'see'	*ag feiceáil
clois 'hear'	*ag cloisint

⟵——— B implies A
- - - - -▶ A motivates B
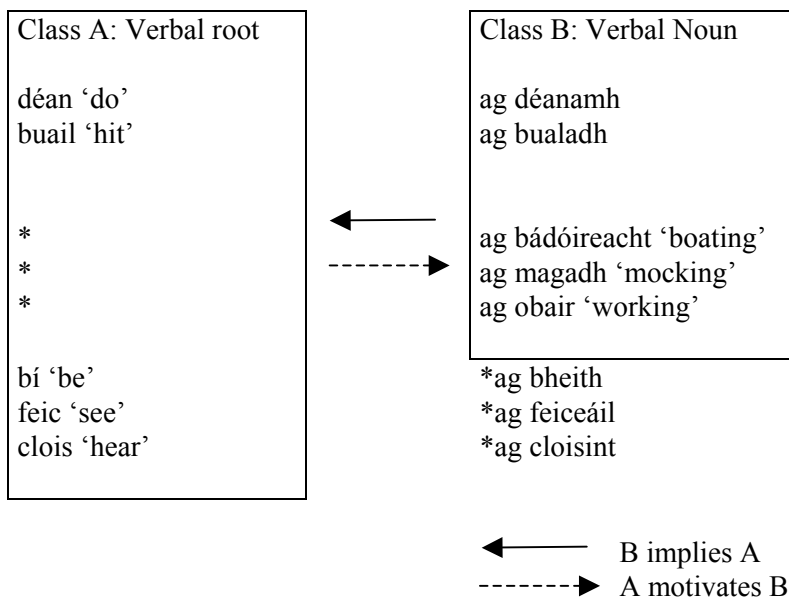
Traditionally, inflection is regarded as productive whereas derivation is conceived of as semi-productive. This means that derivation is characterised by a certain degree of idiosyncrasy and is likely to display unpredictable gaps. Inflectional processes apply automatically. In English every verb takes the inflectional category of past tense (usually realised as *-ed*). It is next to impossible to predict what Agent forming suffix a verb will take or which nominalising suffix it will occur with. However, we cannot deny the existence of some very regular derivational processes such as, for instance, adverb formation, or the derivation of adjectives in *-able*. At the same time, we encounter exception-ridden inflectional phenomena, as demonstrated by Halle (1973).

The formation of progressive VNs involves irregularities in affix selection, and yet it is regular because almost every verb has a corresponding VN, and those which do not can be predicted. Biber *et al.* (1999: 471) demonstrate that lexical associations play a part in the formation of the progressive aspect. Some verbs occur over 80% of the time with the progressive, e.g. *bleed, shop, chase, starve, chat, joke, kid, moan*. Certain verbs have a very weak association with the progressive (less than 2% of the time), e.g. *arrest, award, thank, see, incline*. It is a fact of English grammar that certain verbs are non-continuous, i.e. they

never occur in the progressive; nevertheless, the inflectional status of the *-ing* active participle is never in doubt. The same can be said of stative verbs in Irish.

How do we account for the existence of certain denominal VNs and the absence of corresponding finite verb forms, e.g. *bádóireacht*, *magadh*, *obair* in (62) above? First of all, the fact that dictionaries do not provide infinitive and finite verb forms does not necessarily mean that these forms do not exist or cannot be used. It may simply mean that the verbs in question have a strong association with the progressive. We also cannot rule out the possibility that we are dealing here with defective paradigms, as denominal verbs are infamous for idiosyncrasies in their distribution. We will claim that wherever we have the participle form there exists a corresponding verbal stem, even though in practice, the bare stem is never attested. De-nominal verbs derived from uncountable nouns like, *obair* 'work', *magadh* 'mockery', will be inherently imperfective. On the cognitive plane uncountable nouns are related to imperfective actions, hence abstract nouns like *bádóireacht* are lexically associated with the progressive. Therefore, despite the irregularities and inconsistencies, we will still maintain that the forms in table (62) are inflectional, not derivational.

2.5. Summary

In the previous three sub-sections we have examined the syntax, inflection and distribution of VNs in the progressive construction. The genitive marking on the object complement has been demonstrated to be an example of verbal government. The so-called genitive case of the VN is a positional variant of the active participle. As for the limitations on the productivity of VNs, the fact that stative verbs do not occur as bases is understandable in this inflectional category. The lack of certain verbal stems may be attributed to the fact that de-nominal verbs frequently have defective paradigms, i.e. they may be confined to the participle form. Alternatively, the usage of these verbs may be subject to some stylistic or pragmatic factors. All the facts suggest forcefully that the VN in the progressive construction should be regarded as an inflectional form of the verb.

Now that we have drawn the dividing line between inflectional and derivational categories, we can proceed to establish a more detailed representation of the two types.

3. Inflectional categories

In this section we shall examine the formal aspect of the I-derivation of infinitives and present participles in Irish.

Aronoff (1994) regards derivation and inflection as two sides of the same coin. Inflectional morphology deals with the realisation of syntactic categories and elements that lie above the minimal projection (the morphology of syntax), whereas derivational morphology deals with the realisation of categories and elements that are internal to minimal projections. Verb lexemes in their extrasyntactic state are uninflected both abstractly and concretely. Inflection serves as a syntactic interpretive mechanism, which reads the output of the lexicon and interprets it in terms of Agreement. Each lexeme is scanned for information relevant to the syntax and converted into a form that the syntax can process. This operation takes place while lexical items are being copied into X^{Min} projections, and consists in providing lexemes with the specification of morphosyntactic features. Apart from Verb Class and Transitivity, all verbal categories such as Voice, Aspect, Tense and Modality are inflectional, because they may be expressed by means of a free morpheme cross-linguistically and cannot be arbitrarily fixed for a lexical subclass. Inflectional features originate in the Agr node of Infl.[22] Since they are not involved in agreement phenomena, non-finite forms are not positively marked for any of these categories.

Irish verbs can be inflected to mark Tense (present, past, future), Mood (indicative, conditional and imperative, with some instances of subjunctive), Person and Number, e.g. *brisim*: indicative mood, present tense, first person, singular of *bris* 'break'. Thus, Tense, Mood, Person and Number features accumulate on the verb as it is raised to Infl. During lexical insertion the verb lexeme is equipped only with verbal lexical features. We will now see how sentences with infinitives and participles are generated.

3.1. The infinitive

Let us focus on the derivation of a non-finite VP in Irish. Consider the representation of the intransitive verb *tar* 'come' modelled on its Turkish counterpart in figure (49) from section 5.4. in chapter 1. Note that the grammatical representation is confined to lexical features.

---

[22] Cf. the discussion of morpholexical and morphosyntactic features in section 5.5.2. in chapter 1.

(63)

$$
\begin{array}{lll}
g & = & +\text{ Verb} \\
 & & \text{Subj} \_\_
\end{array}
$$

$\Updownarrow$

$$
\begin{array}{lll}
p & = & /\text{tar}/
\end{array}
$$

$\Updownarrow$

$$
\begin{array}{lll}
r & = & \text{GO (X)} \\
 & & \text{TO (Y) FROM (Z)}
\end{array}
$$
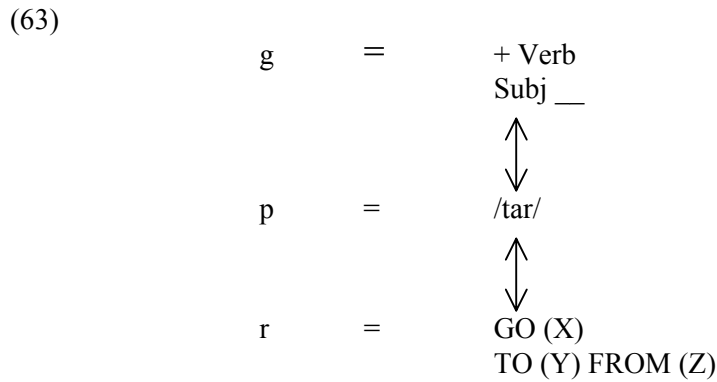
Let us see how the sentence *Féadfaidh sé teacht* 'He can come' is generated:

(64)

IP
$\left[\begin{array}{l} -\ 1^{st}, -\ 2^{nd} \\ \text{S-Agreement} \end{array} \right]$

NP
$\left[\begin{array}{l} -\ 1^{st}, -\ 2^{nd} \\ \text{S-Agreement} \end{array} \right]$

I
$\left[\begin{array}{l} 1^{st}, -\ 2^{nd} \\ \text{S-Agreement} \end{array} \right]$

$\left[\begin{array}{l} -\text{Plural}+\text{Singular} \\ +\text{ Masculine} \end{array} \right]$

ModP
[+ Potential]

VP

sé   *féad*   *tar*
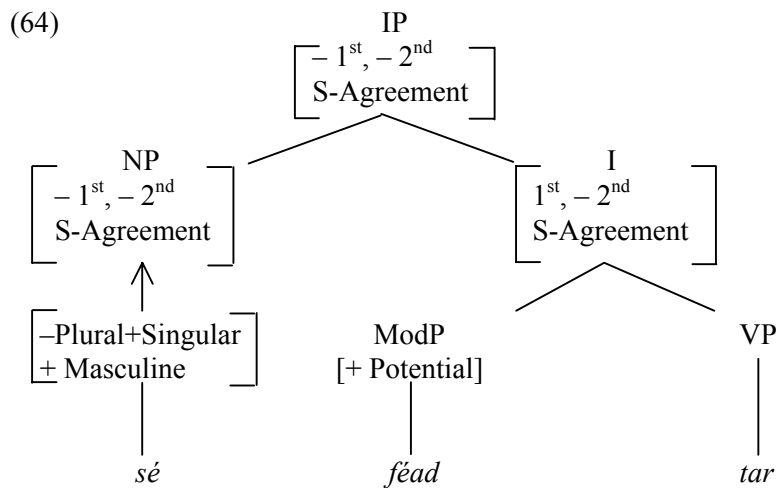
This representation is fed into the MS-Component, which is responsible for the phonological spelling of all morpholexical and morphosyntactic features. Since the latter depend on language specific parameters, they may be expressed by means of bound or free morphemes. The MS-Component erases syntactic brackets as it inserts morphemes. It is there that syntactic nodes are incorporated under lexemes or assigned free grammatical morphemes. First the MS-Component modifies the lexical base *tar* → *teacht*, as the infinitive form

corresponds to feature specification devoid of morphosyntactic features.[23] When the brackets around [Mod VP] are erased the MS-Component will insert a free morpheme – the modal auxiliary verb *féad* 'can'. The addition of person and number features results in further modification of the free morpheme, i.e. the 3rd person singular ending -*faidh* is appended to the modal verb to mark sentence agreement. Below we can see the representation of the lexical base after it has been raised to Infl. The Infl node has been provided with the inflectional category requirements for 'come'.

(65)   **Infl**

g_I	=	– Number	← Number Switch
		– Person	← Person Switch
		– Tense	← Tense Switch
		– Modality	← Mode Switch
g_L	=	irregular verb	**BASE GRAMMATICAL**
		Subj __	**REPRESENTATION**
		$\updownarrow$	
p	=	/teacht/	**PHONOLOGICAL**
			REPRESENTATION
		$\updownarrow$	
r	=	COME	**SEMANTIC**
			REPRESENTATION

3.2. The present participle

The structure we have assumed in section 2.2. for present participles is:

(66)   V^o
                                    ╱   ╲
                          particle   VN

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[23] The structure of sentences involving transitive verbs would of course be more complicated. The MS-Component at this stage would additionally insert the leniting particle *a* under the V^o node to accompany the lexical base. Cf. the structure of non-finite verb forms proposed by McCloskey in (27).

Inflection will be responsible for copying VNs to actual phrase markers provided by the syntax. The feature [+ prog], however, is not realised only by means of syntactic structure. It is also marked on the verbal base. This characteristic differentiates between infinitives and present participles.

Let us see how the sentence *Bhí sé ag siúl* 'He was walking' is generated.

(67)
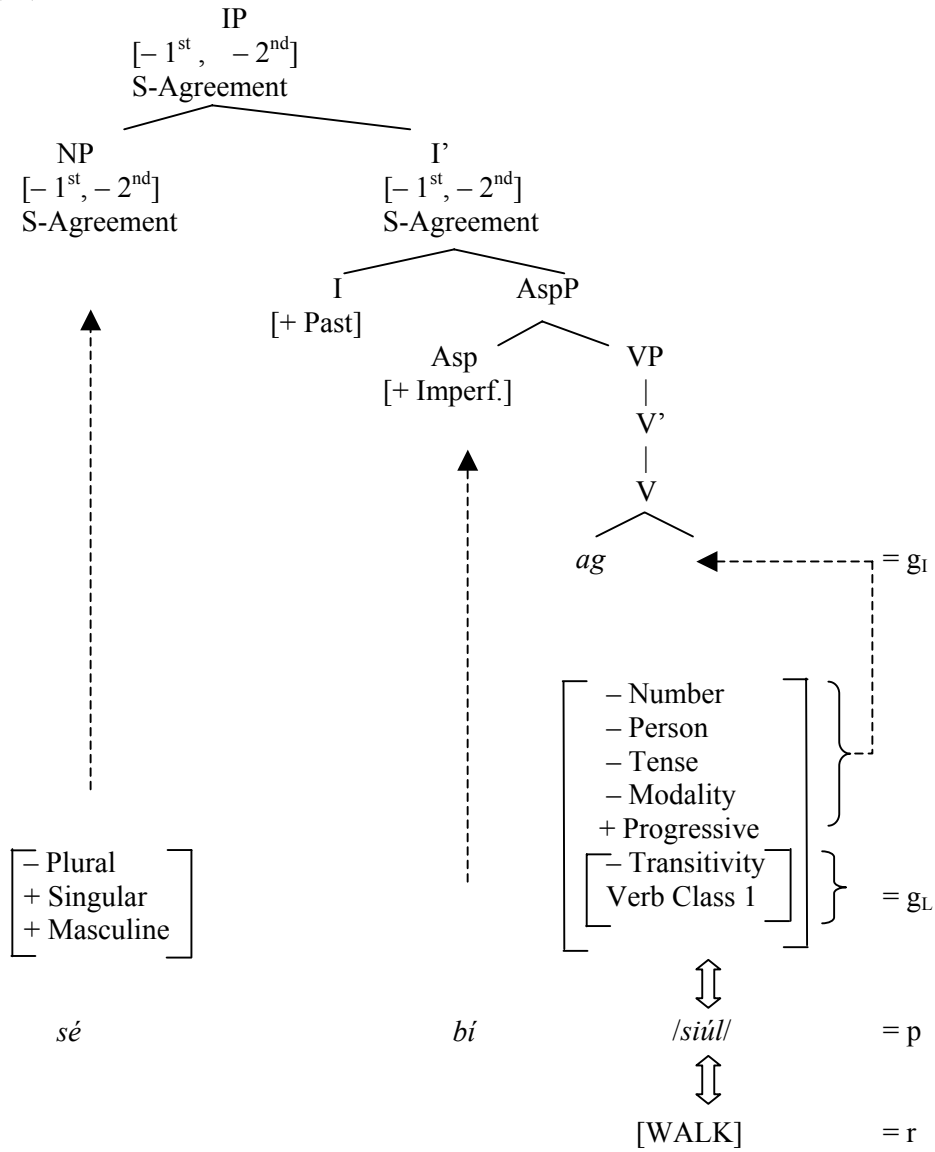
Under V the lexical features are first realised by means of a zero morpheme, and the MS-Component will insert the relevant particle to form the participle. When the brackets around [Asp VP] are erased in an analytic language like Irish the MS-Component will insert a free morpheme. That morpheme is the auxiliary *bí*. Next the IP bracketing [+ Past AspP] will be erased. The MS marker for [+ Past] is the lenition of the initial consonant of the auxiliary *bí* [bˊiː] → *bhí* [vˊiː]. The addition of person and number features does not result in any modification of the free morpheme, as agreement is not overtly marked on the V.[24]

4. Nominalisations

4.1. Lexicalised vs. regular nominalisations

At the beginning of our discussion of nominal uses of VNs in section 1.2., we noted that nominalisations in Irish may have a regular meaning 'act of V-ing', and a more specific lexicalised one. The lexicalised meaning frequently denotes concrete entities. However, nominalisations with a regular meaning are barred from contexts which typically feature countable nouns, and only the lexicalised variant may be pluralised.

Traditionally, to account for the two kinds of nominalisations, one WFR with regular semantics has been assumed and its products have been said to be subject to lexicalisation.

We shall postulate two word formation processes: one which yields countable nouns, and another which is responsible for the formation of uncountable nouns. The semantic differences between the two nominalisation types are not due to their being actional or concrete (we encounter lexicalised nominalisations which preserve their actional reading). Grammatically, they differ in terms of their capacity to express Number. This explains the lack of uniformity in their syntactic behaviour. Their grammatical specification receives certain interpretations at the level of semantic representation. Instead of the opposition regular – lexicalised, it will be more useful to speak of countable vs. uncountable nominalisations. Of course, uncountable will frequently correspond to regular, and countable to lexicalised, but these categories are not identical.

Let us now turn to a discussion of the relevant WFRs, and the syntactic and semantic characteristics of their products. In the formation of infinitives and participles only toggling of morphosyntactic features takes place. The Transitivity and Verb Class features remain intact. The formation of

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[24] Because Irish is VSO, we assume the finite V *bhí* moves to TP, but this is not of relevance here.

nominalisations takes place in the lexicon and consists in the addition of nominal morpholexical features and the neutralisation of verbal features. The difference between the two kinds of nominalisations may be reduced to their capability of pluralising. Countable nominalisations will be equipped with Number features, i.e. Singular and Plural, with + and – value features respectively. Uncountable nominalisations will also posses Number features but they will be unspecified – [0 Singular; 0 Plural].

We need to bear in mind that in our model Number in nouns is an inherent morpholexical rather than a morphosyntactic feature (cf. our discussion in 5.5.2. in chapter 1). Normally, Number is assumed to be an inflectional category.[25] This difference has serious ramifications, as the pluralisation rule becomes an optional operation subject to performative constraints. It will apply 'when the speaker wishes to refer to more than one instance of the set of objects which the lexical item in question names' (Beard 1982: 145).

We also need to draw a clear distinction between mass nouns and count nouns. According to Beard count nouns are singular because they refer to one member of a set of objects, but the conceptual distinction of singular and plural is 'irrelevant' as far as mass nouns are concerned. They are singular by default because the singular is the morphologically unmarked number used 'where number is irrelevant or ambiguous' (Beard 1982: 144). Therefore, the marked plural is used whenever the lexical items bear the features [– Singular; + Plural]. Items which are [+ Singular; – Plural] and [0 Singular; 0 Plural] will be used with the morphological singular.

A similar approach can be observed in cognitive linguistics, where it is assumed that there are three kinds of things: one instance of an object, a number of such objects (these are bounded regions), or an uncountable mass (which is unbounded). A singular noun and its corresponding plural constitute distinct categories (cf. Langacker 1991: 78). When we wish to conceptualise a process as a thing we may view it in its entirety either as something bounded (with a beginning and end) which may be repeated (pluralised), e.g. *run*, or as something unbounded (an action in itself) which is nonreplicable, e.g. *running*.

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[25] The fact that a lexical stem of any gender will automatically inflect for case but not necessarily for number because its paradigm is confined only to the singular or plural, shows that number, in contradistinction to case, is lexical. For example, in Polish we find nouns only with the plural paradigm: *ludzie* 'people', *flaczki* 'tripe' or *usta* 'lips'. There are also nouns declined only in the singular such as *powietrze* 'air', *miłość* 'love' or *drewno* 'wood'. Beard (1982: 140) claims that 'whether a stem is subject to formal or semantic pluralization or singularization is strictly a matter of the lexicon, a matter of lexemic properties.'

Finally, we may focus on its participants, or the products of processes, e.g. *a cheat*, *a buy* or *a drink*.

In sum: the conceptual category of Number is irrelevant in uncountable nominalisations. Countable nominalisations are semantically and formally singular and they may but do not have to pluralise.

4.2. Uncountable nominalisations

The derivational process responsible for the formation of regular uncountable nominalisations is an instance of transposition and the resulting noun is a mass noun. The WF process responsible for the formation of most regular actional nominalisations could be adumbrated as follows:

(68)
± Transitive	→	0 Transitive
Verb Class N		0 Verb Class
		0 Singular 0 Plural
		Noun Class 1, 2, 3, 4, 5
		+ Gender Masc. / Fem.
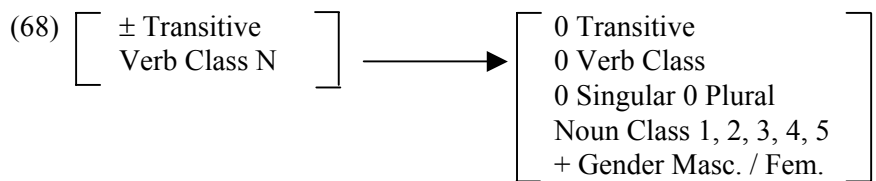
Uncountable nominalisations have an actional reading and bear a striking resemblance to their corresponding verbs. They inherit the selection restrictions of their corresponding verbal bases, i.e. they denote situations involving the same type of participants. They also clearly inherit their subcategorisation frame because the direct object of the verb becomes the direct argument of the corresponding nominalisation. It can be realised syntactically as a genitive NP following the action noun (69a), or an NP dominated by the same preposition which the corresponding verb selects (69b).

(69)

a. *baint   an fhéir*   Cf. *Bhain   sé an fhéar.*
   cut-VN the grass-gen.   cut-past   he the grass-acc.
   'the cutting of the grass'   'He cut the grass.'

b. *an blaiseadh den   bpágánachas*   Cf. *Bhlaiseadar den   bpágánachas.*
   the taste-VN   of-the paganism   they-taste-past of-the paganism
   'the experiencing of paganism'   'They experienced paganism.'

External arguments inherited from verbal bases are realised syntactically either by means of an NP dominated by the preposition *ag* (70), or an NP in the genitive (71).

(70) *Bhí marú   na mílte   ag Cáit.   Cf. Mharaigh Cáit na mílte.*
      was kill-VN the thousands-gen. at-Cáit   kill-past   Cáit   the thousands
      'Cáit could kill thousands.'   'Cáit killed thousands.'

(71) *B'é   rá   a lán daoine....   gurbh   iontach an scéal é.*
      it-was say-VN a lot people-gen .... that-was   strange the story it
      'A lot of people said that it was a strange story.'

      Cf. *Dúirt   a lán daoine   gurbh iontach an scéal é.*
          say-past   a lot people-gen. etc.
          'A lot of people said that etc.'

Actional nominalisations are not often used, probably due to stylistic considerations. We observe a reluctance to use regular nominalisations in positions other than subjects or objects, as illustrated by the sentences above. They are more likely to be attested in formal and literary language. They are nouns but their status is not as secure as that of countable nominalisations (which are, after all, prototypical nouns), and the constructions with the corresponding finite verbs are usually preferred.

4.3. Countable nominalisations

In order to transpose the verb into a countable noun it is necessary to add the features of Number characteristic of singular countable nouns, i.e. + Singular – Plural, the features of a Noun Class typical of one of the five declensions, and Gender features.

(72)
$$
\begin{bmatrix} \pm \text{ Transitive} \\ \text{Verb Class N} \end{bmatrix} \longrightarrow \begin{bmatrix} 0 \text{ Transitive} \\ 0 \text{ Verb Class N} \\ + \text{ Singular} - \text{ Plural} \\ \text{Noun Class 1, 2, 3, 4, 5} \\ + \text{ Gender Masc. / Fem.} \end{bmatrix}
$$

The semantic readings mapped onto this structure may be actional, i.e. they depict a process or state as a general phenomenon (*an t-éag* 'death', *an t-ól* 'drinking', *an t-ithe* 'eating'), or focus on a single occurrence or a concrete exemplification thereof (*titim* 'a collapse', *léim* 'a jump', *tairiscint* 'an offer'). They can denote the result (*crú* '(yield of) milk', *díolaim* 'collection', *at* 'swelling'), the object of an action (*amharc* 'thing seen, sight', *ceannacht* 'purchase') or sporadically its subject (*agóid* 'cantankerous person, scold').

Concrete nominalisations in some cases do not preserve the subcategorisation frames of the related verbs. Participants representing direct arguments of the underlying verbs may be denoted by noun phrases dominated by lexically specialised prepositions. For example, Ó Siadhail (1989: 306) points to the spread of prepositional phrases with *ar* preceding the complements of nominalisations which correspond to objects of verbs.

(73)   *Do rug   gach comharsa abhaile leis   a insint   féin ar an scéal.*
          PRT bring-past every neighbour home with-him his tell-VN self on the story
          'Every neighbour brought home his own version of the story.'

          Cf. *D'inis gach comharsa an scéal.*
             tell-past every neighbour the story
             'Every neighbour told the story.'

In (74) we can observe that the NP corresponding to the direct object of the verb is preceded by the preposition *de* 'from', and that the external argument inherited from the verbal base is realised syntactically by a noun phrase occurring as a genitive.

(74)   *Tá   fágaint   na mairnéalach   den leac seo   ar   na hiontaisí*
          is   leave-VN the sailors-gen.   from-the rock this among   the wonders
          is mó   atá   i stair   an Bhlascaoid.
          greatest which-are   in-the history the Blasket-gen.
          'The departure of the sailors from this rock is one of the strangest things in the history of the Blasket.'

          Cf. *D'fhág   na mairnéalaigh an leac.*
             leave-past   the sailors   the rock
             'The sailors left the rock.'

In both (73) and (74) the nominalisations preserve the selection restrictions as the participants remain the same. However, the inheritance of selection restrictions may be partial because in non-actional senses nominalisations incorporate into their meaning or delete the thematic roles of the verb (cf. Malicka-Kleparska 1988: 67-81). This happens for example when the nominalisation denotes the result or object of V-ing, e.g.

(75)   **Verb – do sth (Theme)**   **Nominalisation**
        rud a mhíniú 'explain sth'   *míniú* 'explanation'
        rud a cheartú 'correct sth'   *ceartú* 'correction'
        rud a fhilleadh 'bend, fold sth'   *filleadh* 'bend'

Numerous countable nominalisations have plural forms, in which case their modification is governed by the same principles which pertain to non-derived nouns. They have little connection with their sentential analogues and their meaning becomes lexicalised, e.g.

(76)   **Verb**   **Nominalisation (plural)**
        oir 'suit, fit, wish, need'   *oiriúintí* 'fittings, accessories'
        admhaigh 'acknowledge'   *admhálacha* 'receipts'
        teagmhaigh 'meet'   *teagmhálacha leictreacha* 'electric contacts'
        tacair 'glean'   *tacair scartha* 'disjoint sets'

Generally, the countable (lexicalised) nominalisations seem to be greatly outnumbered by the uncountable (regular, actional) ones, and it is impossible to discern any semantic or formal regularity in the selection of verbs which serve as the base for the derivation of count nominals. For linguists who opt for one WFR this state of affairs is something to be expected. It is more difficult to postulate two productive WFRs which operate on more or less the same set of verbal bases,[26] and generate uncountable nominalisations on the one hand and countable nominalisations on the other. To defend this line of argument we need to demonstrate that there exist many more countable nominalisations than appears at first sight.

Firstly, we may claim that Ó Dónaill does not provide an exhaustive list of plural forms. For example, in Ó hAnluain (1999: 68) we find the following plural forms not listed in ÓD: *leathadh* 'spread-VN' – *leataí*, *réabadh* 'tear-VN'– *réabthaí*, *cáitheadh* 'winnow-VN' – *cáití*, *loiceadh* 'fail-VN' – *loicthí*, *labhairt* 'speak-VN' – *labhartha*.

Secondly and most importantly, in our framework, where pluralisation is a lexical derivation, plural forms presuppose the existence of corresponding count nouns but the opposite is not necessarily true, i.e. we may envisage the existence of count nouns which do not undergo pluralisation, as the pluralisation rule does not apply automatically. This claim is borne out by the facts. In order to show

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[26] Verbal bases which are excluded as inputs to either of the two rules should form systematic groups. As we have seen, it is not possible to define such a group in any satisfactory way.

that there exist count nouns in Irish devoid of a morphological plural, we shall use constructions with semantically light verbs. Ó Siadhail (1989: 304-308) discusses the use of 'auxiliary verbs' such as *déan* 'do', *tabhair* 'give', *lig* 'let' and *caith* 'spend, throw' to supplement the verbal noun as depicted in (77).

(77)   *Ghearáin   sé.*   *Dhein sé   gearán.*
         complain-past he   do-past he complain-VN
         'He complained.'   'He made a complaint.'

VNs are used in this way when the corresponding verb has a limited set of inflected forms, and/or to achieve a partitive or singulative effect. In this construction the verbal noun is the object of an auxiliary and 'essentially, the auxiliary is being used here to make possible certain specifically nominal uses of the verbal noun' (Ó Siadhail 1989: 307). For this author the verbal nouns in these constructions are part of verbs. We will demonstrate that we are dealing here with a nominalisation and that the nominalisation involved is a countable variant.

Let us first consider the arguments in favour of treating VNs in complex predicates as nominalisations. We will expand Ó Siadhail's list of 'auxiliaries', as certain other verbs, e.g. *faigh* 'get', *bain* 'take, extract', *cuir* 'put', display similar characteristics. If the VNs involved in complex predicates were verbs, the syntactic rules would have to be amended to account for the occurrence of typically nominal modifiers with verbs. Examples in (78a) show that the VN can be preceded by the article:

(78)
a.   *Ní hé sin   **an insint**   a   thug   sé domsa air.*
       is not it   that the tell-VN PRT give-past he to-me on-it
       'That is not how he told it to me.'

       ***An teagasc** a fuair mé   i dtús   mo shaoil*
       the teach-VN that get-past I   in the beginning my life-gen.
       'What I was taught to do in early life'

       *Cad é **an míniú**   a   bhainfeá   as?*
       what is the interpret-VN that get-cond.-you out of-it
       'How would you interpret it?'

VNs can also be preceded by quantifiers and ordinals as depicted in (78b) and (78c) respectively:

b.   *Ní **mórán breathnú** a   thug mé   air.*
is not many look-VN PRT give-past I on-it
'I did not look too closely at it.'

*…i gcomhar éinne a   dhéanfadh **aon bhagairt**   ortha*
with   anyone PRT would-do   any threaten-VN on-them
'…for anyone who would threaten them in any way'

c.   *Nuair a   chualaigh sí **an chéad shraoth**   á déanamh.*
when PRT hear-past she the first sneeze-VN PRT do-VN
'When she heard the first sneeze.'

Verbs are normally modified by adverbs and if they are transitive they are directly followed by an NP. The elements in the structures under discussion are modified by adjectives (79a), and are accompanied by NPs in the genitive (79b).

(79)
a.   *Thug   siad **tógáil mhaith** dá gclann.*
give-past they lift-VN good   to-their children
'They brought up their children well.'

*Rinne sé   **díol maith**.*
do-past he sell-VN good
'He made a good sale.'

*Bhain mé **gáire geal**   astu.*
extract-past I laugh-VN light out-of-them
'I made them give out a hearty laugh.'

b.   *Ná tabhair   **roinnt an chommittee**   air!*
not give-imper. divide-VN the committee-gen. on-it
'Don't divide it as the committee would!'

***snámh   an duine mharaibh** a   dhéanamh*
swim-VN the man-gen. dead   PRT do-VN
'to float on one's back'

***Blaiseadh béil**   ní bhfuair mé.*
taste-VN mouth-gen. not get-past I
'Not a bite / a sup did I get.'

*Cuirfeadh sé **casadh aigne*** *ort.*
put-cond.   it twist-VN stomach-gen. on-you
'It would nauseate you.'

VNs in these constructions can be modified by the nominal intensive prefix *an-* 'great, very good', e.g. *an-dochtúir* 'a very good doctor'.

(80)   *Bain   an-taitneamh   as!*
get-imper.-you great-please-VN out of-it
'Enjoy yourself!'

Fuaireas an-shásamh   ann.
get-past-I great-satisfy-VN in-it
'I enjoyed it.'

Another piece of evidence in favour of regarding VNs in these constructions as nominal is Ó Siadhail's (1989: 306) remark that '*déan* is especially common with unadapted loan words', e.g.

(81)   *Déanfad telephoning ort*.
I-will-do telephoning on-you
'I will telephone you / I will give you a call.'

In brief: the examples above prove conclusively that VNs used together with verbs such as *déan* 'do', *tabhair* 'give', *lig* 'let', *caith* 'spend, throw', *faigh* 'get', *bain* 'take, extract' and *cuir* 'put' are nominalisations.

We will now show that the nominalisations in question are countable. Firstly, such nominalisations can be preceded by the quantifier *íomaí* 'many', which can be followed only by singular countable nouns.

(82)

a.   *Is íomaí cardáil   a   rinneadh   ar an scéal sin.*
is many   wool-carding-VN PRT was-done   on the story that
'That story has often been sifted, debated.'

Secondly, it can be modified by *eile*. When this adjective follows a singular countable noun, it means 'another', e.g. *ceann eile* 'another one':

b.   *Tabhair   téamh beag eile   don bhainne.*
give-imper.-you warm-VN small another to-the milk
'Warm the milk a little more.'

> *Cuir   casadh eile   sa téad.*
> put-imper.-you twist-VN another in-the rope
> 'Give another twist to the rope.'

Thirdly, we come across examples where the nominalisation occurs with the numeral *amháin* 'one'.

c.   *Thug mé féachaint amháin orthu.*
      give-past I look-VN one   on-them
      'I took one glance at them.'

We thus have good reasons to believe that the nouns in light verb constructions are singular count nouns. However, we find examples like the ones in (83) which seem to mar our analysis, as they involve uncountable nouns:

(83)   *Rinne (Chaith)   sé báisteach mhór.*
        do-past (spend-past) it   rain-VN   big
        'It rained a lot.'

        Tá sé ag cur   báistí / sneachta / seaca.
        is it   PRT put-VN rain-gen. / snow-gen. / frost-gen.
        'It is raining / snowing / freezing.'

Are the nouns *báisteach* 'rain', *sneachta* 'snow' and *sioc* 'frost' uncountable, or do we have to do here with count nouns which lack a morphological plural? Actually, in the case of *sneachta* 'snow' ÓD provides the plural *sneachtaí*. The fact that in English they are uncountable (cf. *The snows of last year*, though) does not mean that they have to be so in Irish. For example, in Polish we can use *deszcze* 'rain-pl.' or *mrozy* 'frost-pl.'. Speakers of Irish may have no need for the plural as the nouns in question are mostly used in sentence types like the ones in (83), i.e. in light verb constructions. In light verb constructions we never encounter plural nouns, even though the nouns involved have the morphological form of the plural available, e.g.

(84)   *faisnéis*, gen.sg. *faisnéise*, pl. *faisnéisí* 'relate, inquire-VN'

        *Bhí sé ag   cur   d' fhaisnéise   / *faisnéisí.*
        was he PRT put-VN your inquire-VN-gen.sg. / *inquire-VN-gen.pl.
        'He was inquiring about you.'

gearán, gen.sg. & nom.pl. *-áin*, pl. ~ 'complain-VN'

*Bhí sé   ina   shuí   ag déanamh   gearáin   / *gearán leis fein.*
was he in-his sit-VN PRT do-VN   complain-VN-gen.sg.
/* complain-VN-gen.pl. with-him self
'He sat there feeling sorry for himself.'

toirmeasc, gen.sg. & nom.pl -*misc*, pl. ~ 'prohibit-VN'

*an rud atá ag   déanamh toirmisc   / *toirmeasc   dom*
the thing is PRT do-VN   prohibit-VN-gen.sg. / *prohibit-VN-gen.pl. to-me
'what is holding me back'

If we have a closer look at the semantics of the nominalisations in light verb constructions, we will note a striking resemblance to the English constructions of the type: *have a go*, *take a look*, *make a throw*, *do a check up* or *give a smile*. Just like their English counterparts, Irish nominalisations used in constructions with semantically light verbs lend themselves to antidurative interpretations. However, the structures in Irish, unlike the English ones, require a morphologically singular deverbal noun. This means that *have 10 goes* will have no Irish equivalent. Any noun which features in this type of construction has a (potentially derivable) plural form, which may be used in other contexts. The use with light verbs is much more regular and categorial than that of what we call actional, non-countable nominalisations, discussed in the previous section.

Summing up, those nominalisations which can feature in complex predicates, together with nominalisations which have corresponding plurals, fall within the scope of the WFR producing countable nominalisations.

4.4. Uncountable and countable nominalisations – illustration

Our WFRs in (68) and (72) indicate that the resulting nominalisations belong to one of five declensions. In this section we provide examples of each declensional class. The form of the genitive singular forms the basis for the division into declensions. The formation of the plural is in many respects irregular and unpredictable. The examples below are meant to make it clear that uncountable nominalisations in most cases correspond to the actional, regular reading, whereas countable nominalisations frequently display lexicalised senses. We need to bear in mind, however, that the former are used far less often than the latter, hence illustrative examples are very hard to come by and our interpretations are somewhat tentative. We assume that we are dealing with a

countable nominalisation if a construction involving a semantically light verb is possible. The plural form is, therefore, a clear but not an absolutely essential indicator of the countability of the noun in question. Where the plural form is not provided, we cannot rule out the possibility that it is potentially derivable, or that the nominalisation is countable, as in the examples in (82) above.

Let us start our presentation with 1st declension nouns. This class comprises masculine nouns which end in a broad consonant. Their genitive singular form is characterised by palatalisation of the final consonant as in, e.g. *bád* [bɑːd] 'boat' – *báid* [bɑːdʹ].

1st declension
(85)

VN; gen.; pl.	**siúl** gen. **siúil** pl. **siúlta**
uncountable	'walking': *Is iontach an rud an siúl.* 'Walking is a wonderful thing.'
countable	'travel, journey': *an siúl a dhéanamh* 'to make the journey' *ar mo shiúlta* (pl.) 'in my travels'

2nd declension
Some VNs ending in a slender consonant take *-e* to form the genitive case, like second declension feminine nouns such as *cill* [kʹilʹ] 'cemetery' – *cille* [kʹilʹɪ]. This group includes among others VNs ending in *-ilt*, *-int*, *-ingt*.

(86)

VN; gen.; pl.	**fóirithint** gen. **fóirithinte**
uncountable	'act of helping, succouring (D.)': *bheith thar fóirithint* 'to be beyond aid' *oifigeach fóirithinte* 'relieving officer'
countable	'help, succour, relief': *fóirithint a dhéanamh, a thabhairt ar dhuine* 'help sb' *Agus nár mhór an t-iongnadh nár dheineadar fóirthint ar chuid éigin acu …* 'And wasn't it amazing that they didn't help some of them'

3rd delcension
Verbal nouns which end in *-áil*, *-eachtáil*, *-aíl*, *-áint*, *-úint* and *-Vcht* form the genitive by the addition of depalatalising *-a* just like regular 3rd declension nouns, e.g. *bádóir* [bɑːdoːrʹ] 'boatman' – *bádóra* [bɑːdoːrə].

(87a)

VN; gen.; pl.	**admháil** gen. **admhála** pl. **admhálacha**
uncountable	'acknowledgement, admission': *admháil creidimh* 'profession of faith'
countable	'conformity': *Bainfidh mise admháil as.* 'I'll make him comply.' 'receipt': *foirm admhála* 'receipt form'

There are also other feminine VNs which belong to the third declension. They end in a slender consonant or in *-int* or *-m*.

(87b)

VN; gen.; pl.	**foghlaim** gen. **foghlama**
uncountable	'learning': *foghlaim ceachtanna, teangacha* 'learning of lessons, languages'
countable	'lesson': *Is breá an fhoghlaim a thug tú dó.* 'You taught him well / (ironic) what a fine thing you taught him.'

There is also a group of masculine verbal nouns which end in a broad consonant or *-ith* which are declined like 3rd declension nouns.

(87c)

VN; gen.; pl.	**íoc** gen. **íoca** pl. **íocaí**
uncountable	'(act of) paying, payment': *íoc fiach* 'payment of debts'
countable	'payment': *Déanadh a rogha duine an t- íoc.* 'No matter who bears the expense.'

4th declension

Nouns belonging to the 4th declension end in a vowel or *-ín* and the genitive form is the same as the nominative. VNs which are formed by the addition of *-e* to the verbal root belong to this group.

(88a)

VN; gen.; pl.	**gáire** gen. **gáire** pl. **gáirí**
uncountable	'(act of) laughing': *agamsa a bhí an gáire* 'I had the laugh on my side.' *D'imigh an gáire orm.* 'I couldn't help laughing.' *Ní haon ábhar gáire é.* 'It is no laughing matter.'
countable	'laugh': *Lig sé a sheangháire.* 'He gave a loud laugh.' *Bhainfeadh sé gáire as cat.* 'It would make a cat laugh.'

Verbal nouns ending in a vowel are also declined like 4th declension nouns.

(88b)

VN; gen.; pl.	**socrú** gen. **socraithe** pl. **socruithe**
uncountable	'settlement': *socrú gaoithe, gleo* 'abatement of wind, noise' *socrú ceiste* 'settlement of a question'
countable	'agreement': *socrú a dhéanamh le duine faoi rud* 'to reach an agreement with sb about sth' *socruithe sochraide* 'funeral arrangements'

5th declension

This declension comprises mostly feminine nouns ending in *-il*, *-ir*, *-in* or in a vowel. In the genitive case they end in a broad consonant, e.g. *cabhail* [kaul´] 'body'– *cabhlach* [kauləχ], *athair* [ahər´] 'father' – *athar* [ɑhər].

(89)

VN; gen.; pl.	**triail** gen. **trialach** pl. **trialacha**
uncountable	'trying, testing': *triail cáis* 'trying of a case (in court)'
countable	'trial, test': *triail a bhaint as rud* 'give sth a trial' *trialacha gunna* 'gun tests'

5. Summary

The traditional term Verbal Noun is used with reference to four separate categories. Two of them are inflectional, i.e. the infinitive, which is fully categorial, and the active participle, which displays some gaps. The two categories reflect the grammatical distinction in the language between events (dynamic situations viewed punctually) and processes (dynamic situations where overt expression is given to the duration of the situation) (cf. Ó Corráin (1997: 159-171). Two of the four categories in question are derivational, i.e. countable and uncountable nominalisations. Like in English, we can note conceptual and formal parallels between inflectional and derivational categories. In Irish infinitives will be paired with countable (lexicalised, concrete) nominalisations, because there are virtually no limitations on their formation and because they view actions as complete. Uncountable (actional) nominalisations could be paired with VNs appearing in the progressive structure because their semantics is imperfective and also because neither of them accept stative verbs as their bases, e.g. it is not possible to say **Tá siad ag bheith* 'They are being' or **beith*

na ndaoine sa seomra 'the being of the people in the room'.[27] Certain denominal or other verbs which are used mainly in the progressive are prone to serve as bases for uncountable nominalisations only. In other words, the infrequent use of infinitives (or finite verb forms) goes hand in hand with a reluctance to use countable nominalisations. This tendency is especially evident in the case of certain VNs in -*áil* and those in -*eacht* and -*íocht*.[28] Of course these crude observations, roughly sketched in the table below, need to be further investigated and verified against a greater body of data.

(90)

inflection	**infinitive**	**active participle**
	déanamh 'do'	déanamh 'doing'
	bualadh 'hit'	bualadh 'hitting'
	?bádóireacht	bádóireacht 'boating'
	?magadh	magadh 'mocking'
	?giurnáil	giurnáil 'doing odd jobs'
	bheith 'be'	*bheith
	feiceáil 'see'	*feiceáil
	cloisint 'hear'	*cloisint
derivation	**countable nominalisation**	**uncountable nominalisation**
	déanamh 'deed'	déanamh 'doing'
	bualadh 'fight'	bualadh 'hitting'
	?bádóireacht	bádóireacht 'boating'
	?magadh	magadh 'mocking'
	? giurnáil	giurnáil 'doing light work'
	beith 'being, entity'	*beith
	feiceáil 'sight'	*feiceáil
	cloisint 'hearing'	*cloisint

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[27] It is worth noting, however, that the inventory of stative verbs in Irish is not as numerous as in other languages. At some point Irish verbs lost their stative function and became essentially dynamic. Wagner (1959: 127 ff) demonstrates that in early Irish there were more stative as well as dynamic verbs: *ad-ágathar* 'fears', *do-futhraccair* 'wishes', *ad-muinethar* 'remembers' etc. However, in the modern language such concepts are expressed by means of constructions involving nouns:

 ad-ágathar > tá eagla air 'is fear on-him; he is afraid'
do-futhraccair > is áil leis; is mian leis 'is wish with-him; he wishes'
ad-muinethar > tá cuimhne aige ar 'is memory at-him about; he remembers'

As a result, the verbal bases for the formation of participles and infinitives on the one hand, and uncountable and countable nominalisations on the other, overlap almost completely.

[28] A detailed discussion of these VNs is available in section 4.3. and 5.3. below.

The four categories in question are marked by the same set of morphophonological markers. We might imagine a system with three different homophonous *-ing* suffixes (i.e. nominal, verbal and adjectival *-ing*), but in Irish such a move would be far from economical. The separation of the functional and morphophonological aspect of morphological operations is a must. Otherwise an enormous proliferation of affixes will follow. There are four morphological processes, two derivational, and two inflectional, which result in the formation of the categories above. And each of these four processes is mapped onto the same set of endings. Each form can only be deciphered on the basis of the specific syntactic context in which it occurs.

3 Morphophonological Exponents

1. Morphological Spelling Operations in LMBM

The MS-Component works on the output of abstract morphological rules, which in Beard's terminology are referred to as derivation.[29] The conditions on derivation are distinct from those on affixation. Beard (1995: 50-51) illustrates this on the basis of deadjectival nominalisations.

(1) | **Adjective** | **Noun** |
|---|---|
| warm | warm-th |
| intelligent | intelligen-ce |
| readable | readabil-ity |
| slow | slow-ness |
| white | white-Ø |

On the derivational level the operation is simple: it consists in transposing the underlying adjective into a noun. The only constraint that the rule must conform to is that the underlying adjective be qualitative. On the morphological level, the process is more complicated. The conditions on affixation are more intricate. The suffixation rules must have access to '(a) the current category of the stem, (b) some evidence of its previous category, (c) the phonology of the final syllable of the stem for /-iti/ and /-s/ and (d) the semantics of the colour terms for the (optional) null marking'. These conditions are divorced from the determination of the meaning of the derivative.

   Of the morphophonological modifications mentioned above, Ø is the most controversial. Words which may shift their syntactic allegiance form one syntactic category to another without undergoing any formal change continue to be one of the most intensely debated issues in morphological investigations. The phenomenon is referred to as conversion or zero derivation. In Slavonic linguistics the term paradigmatic derivation is employed, whereas in cognitive linguistics this is regarded as semantic extension. The problems besetting the various approaches and some conclusions drawn by different linguists, which are not of immediate interest to us, are extensively discussed in Cetnarowska (1993: 14-19) and especially Twardzisz (1997: 63-85). Suffice it to say that in the

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[29] This term covers traditional inflection as well. Cf. section 5.5 in chapter 1.

model adopted here no zero morphemes per se are recognised. Beard (1984: 53) explains: 'zero morphemes turn out to be exactly what intuition promotes: no morpheme at all, but the absence thereof'. We have to do with a process (a derivational or inflectional one) without an overt phonological reflex which may contrast with a set of exponents used to mark the same function (cf. Marchand 1969). Morphology is not merely concatenation of morphemes. What matters is the system of relations or contrasts that morphemes create. If there is a number of co-functional affixes, no marking at all also performs a contrastive function.

The MS-Component relates morphosyntactic representations to their phonological representation. This mapping is not always one-to-one. Aronoff (1994: 22-27) advances a similar view. The mapping from morphosyntax to phonological realisation passes through an intermediate level, the morphomic level, which is neither syntactic nor phonological but purely morphological – 'morphology by itself' as he puts it. Aronoff considers the case of the English perfect participle. The morphophonology of the past participle can be represented as a function from verb lexemes to their participle forms:

F (V) $\rightarrow$ Past Participle Form

Let us call this function F_{en}. The perfect participle is a kind of abstract category realised in the context of a given verb through the operation of one or more of a set of realisation rules. Lexically marked verbs are marked with *-en* (*forgotten*), *-t* (*left*), ablaut (*sung*) or a combination of these (*broken*). The default representation is the dental suffix with perfectly predictable allomorphs – [t], [d], and [əd]. F_{en} is, therefore, a discontinuous morphophonological function similar to F_{past} or F_{plural}, which also do not have a unique morphological marker. What syntactic value is mapped onto the morphophonological function F_{en}? The perfect participle is used to form the passive and the perfect verb. The most recent syntactic accounts recognise no link between the two constructions. They are not related syntactically, but they must be identical at some level as they are never morphologically distinct in English. Some verbs now show a tendency towards regularisation, e.g. *knelt / kneeled*, but no speaker accepts an innovative passive participle and retains the conservative perfect participle or vice versa. Aronoff argues that the two forms are paired by means of the morphologically abstract entity F_{en} regardless of any possible syntactic and semantic differences. There is a mapping to the function F_{en} from either passive or perfect. F_{en} is a purely morphological function, a morpheme. Its morphological effect is the erasing of any possible distinction between the two syntactic elements in their realisation on the verb (the difference in the auxiliary will disambiguate the two constructions).

In Irish we need to postulate a morphome, a function which erases the distinction between participles, infinitives, and countable and uncountable verbal nominalisations. There is a purely morphological function which relates verb lexemes to their 'derived' forms. Let us call this function F_{VN}, which is a discontinuous morphophonological function having recourse to lexical marking and employing a myriad of affixes.

(2)

PARTICIPLE	INFINITIVE	COUNT NOMINAL	NON-COUNT NOMINAL
– Number	– Number	+ Singular	0 Singular
– Person	– Person	– Plural	0 Plural
– Tense	– Tense	Noun Class N	Noun Class N
– Modality	– Modality	+ Gender	+ Gender
+ Progressive			
± Transitive	± Transitive	0 Transitive	0 Transitive
Verb Class N	Verb Class N	0 Verb Class N	0 Verb Class N

$$F_{VN}$$

… REALISATIONAL RULES …
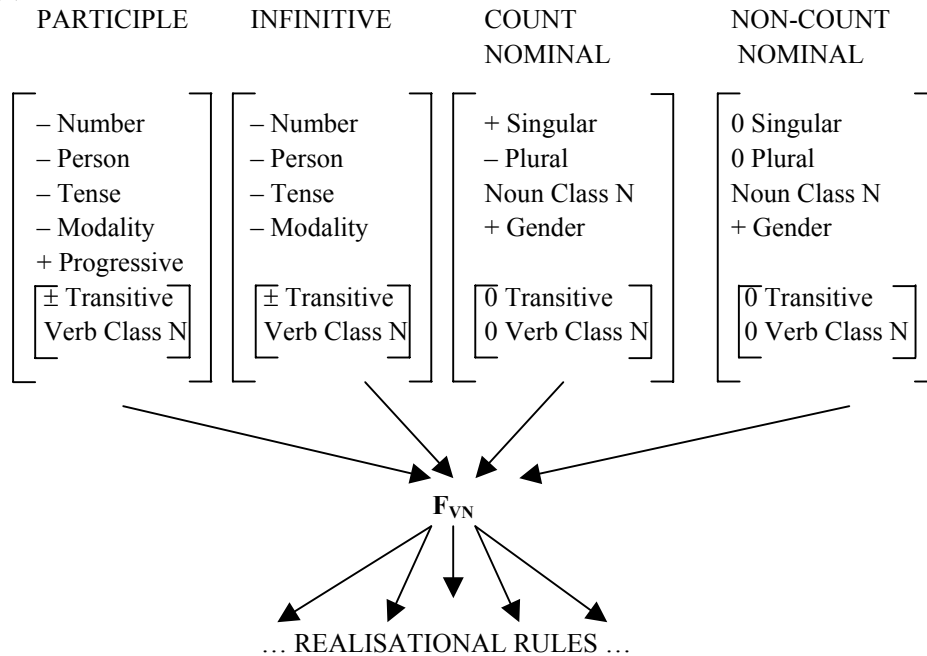
The VN becomes an abstract morphological category. F_{VN} is a set of realisational rules specifying the distribution of affixes and morphophonological modifications with respect to a verb which serves as the input. It is at the morphophonological level that infinitives, participles and both kinds of nominalisations become one. The distinction is neutralised. Before we discuss in detail the formal facet of the abstract I- and L-derivational rules depicted above, we provide an introductory section on verbal roots and stems in Irish.

2. Verb Morphology in Irish

2.1. Introduction

Irish inflectional morphology is an area which has received considerable attention from previous scholars. Various aspects of verbal inflection have been analysed in for example Bergin (1904, 1905), Wigger (1972), Ó Siadhail (1989), Ua Súilleabháin (1988), Ó Sé (1991, 2000). Irish verbs can be inflected to mark tense (present, past, future), mood (indicative, conditional and imperative, with some instances of subjunctive), person and number, and also non-finite forms (Ó Dochartaigh 1992: 66-67).

The 2nd person singular imperative serves as the citation form because in many cases it coincides with the verbal root. Traditional grammars describe Irish verbs as falling into two conjugations, distinguished mainly on the number of syllables in the root.

First conjugation verbs consist of monosyllabic verbs which end in a consonant, e.g. *mol* [mol] 'praise', *bris* [briʃ] 'break', monosyllabic verbs which end in *-igh*, e.g. *nigh* [n'ig'] 'wash', *crúigh* [kruːg'] 'milk', and verbs which terminate in *-áil*, e.g. *pacáil* [pɑkɑːl'] 'pack'. Verbs belonging to the second conjugation are mainly polysyllabic verbs terminating in *-(a)igh*, e.g. *ceannaigh* [k'anəg'] 'buy' and in *-il, -ir, -in, -is*, e.g. *oscail* [oskəl'] 'open'.

(3)

First conjugation	**Second conjugation**
• monosyllabic verbs which end in a consonant	• polysyllabic verbs which end in *-(a)igh*
• monosyllabic verbs which end in *-igh*	• polysyllabic verbs which end in *-il, -ir, -in, -is*
• polysyllabic verbs which end in *-áil*	

Irregular verbs form a separate group. There are 12 verbs whose conjugation is irregular in varying degrees: *abair* [abır'] 'say', *beir* [b'er'] 'catch', *clois* [kloʃ] 'hear', *déan* [d'eːn] 'do', *faigh* [faig'] 'get', *feic* [f'ek'] 'see', *gabh* [gɑv] 'go, take', *ith* [ih] 'eat', *tar* [tɑr] 'come', *téir* [t'eːr'] 'go', *tabhair* [tuːr'] 'give' and *bí* [b'iː] 'be'.

The only criterion for the distinction between the conjugations in question is the form of the suffix marking future tense, which is *-f-* [h] for the first conjugation and *-(e)ó-* [oː] for the second. This division is felt by some linguists to be artificial. Thus Ó Siadhail (1989: 70) claims that 'it is sufficient to speak of

one conjugation as, excepting one variation in the future, the same set of endings apply to all verbs'. The same stand has been taken by Ó Sé (1991). We will explain the reasons for this claim in the next section.

2.2. Segmentation: stems and endings

Let us consider the principles according to which Modern Irish verbal forms should be segmented into roots, stems and endings (Ó Sé 1991, Ó Dochartaigh 1992: 67).

Irish verbal forms are best analysed as roots followed by one or two suffixes. In some cases suffixation, combined with initial mutation of the root, serves as the exponent of morphosyntactic properties. Inflection can be divided into two stages. Firstly, tense/aspect stems are formed from roots, and afterwards the building of personal paradigm ensues. Consequently, the normal order of elements within the finite verbal paradigm is:

(4)   root + tense marker + person (and number) marker

	Root		**Stem**		**Person**
a.	[kir´] cuir	→	[χir´-] chuir	→	[χir´əs] chuireas
	'place'		'placed'		'I placed'
b.	[kir´] cuir	→	[kir´h-] cuirf-	→	[kir´həd] cuirfead
	'place'		'will place'		'I will place'

(4a) shows that the formation of '1ˢᵗ person singular past' form of the verb *cuir* involves lenition to form the past stem and adding the suffix *-as* to mark person. (4b) indicates that the formation of the future stem of *cuir* involves the suffix *-f-* [h]. We cannot really prove that lenition precedes suffixation, in the way that the future morpheme precedes the person/number suffix. However, we do find tense marking without person/number, e.g. *chuir* in responses, which suggests that tense is closer to the root.

The stem is what remains when a given affixational layer is removed. In our example above person/number marking is this layer. It follows from (4) that a given verb may have more than one stem. The investigation of past and future verb forms leads Ó Sé (1991: 78) to the conclusion that we should regard the 'present' stem as a general (verbal) stem. It is 'used by default when past or future marking is inoperative'. Therefore, in the next section we focus on the present stem.

2.3 The present stem

The identification of the present stem of 1st conjugation verbal forms is not problematic. The root functions as the verbal stem and in most cases is identical in form to the second person singular imperative, e.g. *cuir* [kir′] 'put, 2nd sg. imperative' – *cuirim* [kir′ + ɪm′] 'put, 1st sg. indicative'. The segmentation of 2nd conjugation verbal forms is less straightforward.

   Compare the 1st person present indicative forms of *glan* 'clean' and *ceannaigh* 'buy', which illustrate the first and second conjugation respectively.

(5)

	I	glan 'clean'	**II**	ceannaigh 'buy'
1. sg.	-(a)im	glanaim	-(a)ím	ceannaím
1. pl.	-(a)imid	glanaimid	-(a)ímid	ceannaímid

ceannaím 'buy, 1st sg. ind.' seems to contain the same suffix as *glanaim* 'clean, 1st sg. ind.' where the initial *-i* of the suffix is elided after the long vowel of the stem, i.e.

Stem	**Personal ending**
ceannaí-	*-im*

Following Ó Sé (1991), we analyse all inflectional present indicative forms as reflecting one of the templates below:

(6)
a.   ROOT   +   SUFFIX
b.   ROOT   +   SUFFIX   +   SUFFIX

1st conjugation verbs tend towards the shape in (6a) whereas 2nd conjugation verbs have the structure in (6b), where the first of the two suffixes is the conjugation marker *-i-*. In other words, 2nd conjugation verbs differ from 1st conjugation counterparts in having a vocalic suffix between the root and the person/number ending. The fact that some monosyllabic roots have it, e.g. *ceann-*, and others lack it, e.g. *cuir-*, is lexically determined. As person/number endings are identical for both kinds of verbs, it seems more appropriate to regard

the conjugations as stem classes rather than inflectional classes.[30] We can draw a parallel with Latin theme vowels, which usually show up in the present active infinitive and form the basis for the classification of the verb conjugations.

(7)
Theme vowels of Latin verbs (Aronoff 1994: 45)

Conjugation	Theme vowel	Present active infinitive	Gloss
1st	ā	am - ā - re	'love'
2nd	ē	dēl - ē - re	'destroy'
4th	ī	aud - ī - re	'hear'
3rd	e	leg - e - re	'pick'
3rd	Ø	fer - re	'carry'

Theme vowels in Irish verbs.

Conjugation	Theme vowel	1st sg. active indicative		Gloss
1st	Ø	[kirʹ + ɪmʹ]	cuir- im	'I put'
2nd	í	[kʹan + iː + ɪmʹ]	ceann - í - im	'I buy'
		[osɡilʹ+ iː + ɪmʹ]	oscla - í - im	'I open'

Hence the general stem for 1st conjugation verbs is identical to the root and the general stem of 2nd conjugation verbs consists of the root and a conjugation marker, as depicted below:

(8)	**Root**	**General stem (theme)**
	cuir-	cuir-
	ceann-	ceannaí-
	oscl-	osclaí-

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[30] Inflectional classes are more or less arbitrary groupings of words associated with different sets of inflections. For example, French has four regular conjugations, represented by *parler* 'to speak', *finir* 'to finish', *recevoir* 'to receive' and *vendre* 'to sell' because they conjugate differently. The 1st person singular perfect tense form is respectively *j'ai parlé, j'ai fini, j'ai reçu, j'ai vendu*. If there are theme vowels (also referred to as conjugational markers or extensions), the theme vowel serves no other purpose than to help create a base to which to attach the inflectional desinences, and to define the separate conjugation. In Russian verbs are divided into two main classes. Different endings with the same morphosyntactic function are preceded by either *-a(j)-* or *-i-* themes. In contradistinction, the motivation for membership of a stem class is lexical. Stems are not defined ī terms of an inflectional system.

2.4. Base for the MS-Component

Our task now is to establish the base for the morphophonological operations spelling the morphemic function F_{VN}. We can choose between the root and the general stem. We shall opt for the root, as it would be completely counterintuitive to form transpositions (i.e. nouns which are a product of word formation – cf. section 4. in chapter 2) from the general stem. The stem is not a suitable base for nominalisations because, unlike in Latin, the theme vowel is appended to the root only to form inflectional forms of verbs. Inflectional markers are precluded from the position preceding affixes marking derivational categories.[31]

The root seems to be a more suitable candidate. The only objection that could be raised against our approach is whether it is correct to derive inflectional forms of verbs such as infinitives and present participles from the root rather than the stem. It turns out that inflection is not monolithic and that it is possible to do so. Booij (1994, 1996) distinguishes two types of inflection, namely inherent and contextual. Inherent inflection is not required by the syntactic context. It is a form which expresses certain functional meanings such as number for nouns, the comparative and superlative degree of adjectives, or tense and aspect for verbs. The form with inherent inflection is semantically distinct; it bears a meaning in itself and is of secondary syntactic relevance. In contrast, contextual inflection is determined by the syntactic context, i.e. it is used to regulate syntactic structure. Contextual inflection will, for example, mark person and number agreement between the verb and its subject, or structural case markers on nouns. What is important for our discussion is that infinitives and participles count among the examples of inherent verbal inflection. As inherent inflection contributes to the meaning of the verb, it seems more appropriate to attach inherent inflectional markers to the root.

In the case of monosyllabic first conjugation verbs the root will equal the citation form. The root of disyllabic first conjugation verbs in *-áil* will actually terminate in *-ál*. In order to obtain the root of second conjugation verbs whose citation form ends in *-(a)igh*, we need to rid the citation form of this terminal string. In the case of disyllabic verbs whose citation form ends in a palatalised consonant (e.g. *oscail* 'open') we will have to consider other inflectional forms, as in the citation form final consonants are invariably palatalised, whereas the root may contain either a velarised or a palatalised consonant (e.g. *oscl-*'open' vs. *aifir* 'rebuke'). Only by analysing other inflectional forms and deducing

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[31] A universal tendency for derivational affixes to appear closer to the root than for inflectional formatives was formulated by Greenberg (1966: 93).

person and number desinences together with the theme vowel, can we arrive at the form of the root. Our observations are summarised below:

(9)

General stem	**Root**
cuir-	cuir-
crú-	crú-
pacál-	pacál-
ceanna**í**-	ceann-
osclaí-	osc(ə)l-

Later we will argue that the stem-class (we will continue to use the traditional term conjugation, though) will play a crucial part in determining the default forms of VNs.

3. VN formation – Ó Siadhail's proposal

We now proceed to look at the morphophonological operations in detail. Unlike Ó Sé (1991), Ó Siadhail (1989) does not confine himself to observations regarding Irish finite verbs. He also touches upon the formation of verbal nouns and observes that it resembles the formation of ordinary nouns as it involves consonant extension (Ó Siadhail 1989: 195-197).[32] It is additionally characterised by a great degree of irregularity. He comes up with three basic rules and four marginal consonant extensions. He insists that it is not possible to predict the form of the VN from the shape of the verb, and consequently this information must be supplied in the lexicon. Here is a brief presentation of the three major rules he evokes to form VNs.

The first rule attaches a *-t* [t´] to disyllabic verbs which terminate in a slender liquid or nasal or *-ch* [χ]

(10)

seachain + t	'avoid-VN'
bagair + t	'threaten-VN'
oscail + t	'open-VN'
éisteach + t	'listen-VN'

It is not clear what form constitutes the base for this rule. In the first three examples it is the second person sg. imperative form, i.e. the citation form. The base of the fourth is arbitrary, as there is no freely occurring form **éisteach* and

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[32] Consonant extension is viewed as the addition of a morpheme and its effect on the relevant syllable (Ó Siadhail 1989: 108).

the imperative form is *éist*. Thus, the form is also analysable as *éist + eacht.* The suffix in question is also added to a nasal which is the result of consonant extension, as in *ligint* 'let-VN', which can be decomposed into *lig + n + t*. Some monosyllabic roots such as *bain* 'cut' are also exceptionally subject to this rule.

   The second rule attaches no suffix at all to verbs with a final *-áil*, and to a group of monosyllabic verbs which have no characteristic feature that would include them under this rule.

(11)   péinteáil   'paint-VN'
          ól   'drink-VN'
          cur (~ cuir)   'put-VN'

Ó Siadhail seems to overlook the fact that some of the forms such as *cuir* 'put' additionally undergo depalatalisation. For him they are subject to the same rule.

   The third rule also seems suspect. Namely, the remaining roots – the ones not dealt with by the two rules presented above – take the ending *-dh* [ɣ] which in some cases (unpredictable ones) results in the depalatalisation of the final consonant.

(12)   pós + dh   pósadh   'marry-VN'
          buail + dh   bualadh   'hit-VN'

According to Ó Siadhail, depalatalisation is regular in the case of verbs where *-gh* [j] has been added to the root to form the stem – ***ard*** 'high'→ ***ard**aigh* 'raise'. He derives the VN as follows: *ardaigh → ardagh → ardaghadh (→ ardú)*. The fact that the verbal nouns taking the *-dh* suffix are actually pronounced as [ə], or [uː] in the case of disyllabic verbs ending in *-gh*, is accounted for by phonological rules.

   One major objection we could raise to this is that the author relies on the old spelling and not the pronunciation of the forms in question. In the old orthography, the VN of *ardaigh* was spelt *ardaghadh*. The modern spelling *ardú* reflects the pronunciation. Synchronically, there is no sign of the ending [ɣ]. His representations are very abstract and it is difficult to understand how we get *ardú* from *ardaghadh*.

   To sum up: it can be said that Ó Siadhail's treatment is far from satisfactory and has little predictive and explanatory merit. He regards the distribution of co-functional suffixes as mostly unpredictable, and the task of formulating explicit rules accounting for the existing formations does not seem feasible. Therefore, VNs should be entered in the lexicon as completely specified items.

In the following sections we shall investigate the morphological spelling operations responsible for the formation of non-finite verb forms and nominalisations in Irish. They will be applied to the root and will have access to verbal lexical features such as Verb Class and Transitivity. The distribution of each affix and morphophonological operation will be defined and delimited by means of appropriate conditions and constraints. We will make a distinction between unproductive suffixes whose attachment is regulated by lexical marking (section 6.), and productive exponents which are attached as a result of the operation of synchronic rules (section 4. and 5.). The operations involved will be the spell-out rules of the morphomic function F_{VN} which neutralises the morphological distinction between non-finite forms and nominalisations. This function may be adumbrated as follows:

F_{VN} (V) → [[V] + morphophonological modification]

It specifies that verbs undergo morphophonological modification. It also specifies the linear structure of the output as it provides the information where the exponent is placed with respect to the base.

4. I Conjugation

4.1. -(e)adh [ə], -adh [ə⁻ᴾ]

4.1. -(e)adh [ə], -adh [ə$^{-P}$]

The majority of monosyllabic verbs belonging to the first conjugation form the verbal noun by the addition of *-(e)adh*, which is phonetically realised as a short unstressed vowel – [ə]. All reduced vowels are here transcribed as [ə], although some authors differentiate between [ə] and [i]. The former is used in the neighbourhood of velarised consonants, the latter in palatalised environments, e.g. *croch* [kroχ] 'hang' – *crochadh* [kroχə] 'hang-VN', as opposed to *mill* [mˊilˊ] 'spoil' – *milleadh* [mˊilˊi] 'spoil-VN'. Palatalisation is indicated in spelling by the presence of *e* or *i* before the ending, as in for example *mill*, *milleadh* above. We use one symbol [ə]. Doyle and Gussmann (1996) list over 800 items taking this suffix.

Monosyllabic verbs ending in *-igh* [igˊ], *-ígh* [iːgˊ] as well as disyllabic verbs terminating in *-áil* [ɑːlˊ] are excluded from the scope of this rule. In other words, what is a positive condition on the operation of one affixational rule is a negative condition on the operation of another.

We also come across VNs whose final consonant is velarised despite the palatalised quality of the final consonant in the corresponding verb.[33]

(13)

a. **V = citation form**   **VN**

buail [buəlˊ] 'hit'   bualadh [buələ]
fáisc [fɑːʃkˊ] 'squeeze'   fáscadh [fɑːskə]
loisc [loʃkˊ] 'burn'   loscadh [loskə]
brúisc [bruːʃkˊ] 'crush'   brúscadh [bruːskə]
bailc [balˊkˊ] 'pour down'   balcadh [bɑlkə]
rúisc [ruːʃkˊ] 'bark'   rúscadh [ruːskə]
troisc [troʃkˊ] 'fast'   troscadh [troskə]

b. **V = citation form**   **VN**

adhair [aɪrˊ] 'adore'   adhradh [aɪrə]
ceiliúir [kˊelˊuːrˊ] 'warble'   ceiliúradh [kˊelˊuːrə]
adhlaic [aɪləkˊ] 'bury'   adhlacadh [aɪləkə]
seachaid [ʃaχədˊ] 'deliver'   seachadadh [ʃaχədə]
tíolaic [tˊiːləkˊ] 'bestow'   tíolacadh [tˊiːləkə]
tuaslaig [tuəsləgˊ] 'solve'   tuaslagadh [tuəsləgə]
diúraic [dˊuːrəkˊ] 'cast'   diúracadh [dˊuːrəkə]
tiomairg [tˊimərˊgˊ] 'gather'   tiomargadh [tˊimərgə]

We established in 2.4. that the root is the base for the MS operations. For some verbs, this is different from the citation from. All verbs depicted in table (13b), i.e. those that end in [kˊ dˊ gˊ rˊ], the majority of which are disyllabic, and some terminating in [ʃkˊ], conjugate like other verbs ending in a non-palatalised consonant. This can be seen if we add an ending, e.g. the present indicative ending unmarked for person:

glan   'clean, 2^(nd) pers. sg. imper.'
glanann   'clean, ind. pres.'
glanadh   'clean-VN'

---

[33] For ease of exposition the abbreviation VN is used in tables as a cover term for the infinitive, present participle and nominalisations. Whenever it only denotes the present participle, examples with the particle *ag* are provided.

(14)

2nd sg. imperative – citation form	Ind. present	VN
adhair	adhrann	adhradh
céiliúir	céiliúrann	céiliúradh
adhlaic	adhlacann	adhlacadh
diúraic	diúracann	diúracadh
tíolaic	tíolacann	tíolacadh
tiomairg	tiomargann	tiomargadh
tuaslaig	tuaslagann	tuaslagadh
bailc	balcann	balcadh

We can see that the verbal root does not equal the citiation form which terminates in a palatalised consonant. In other words, the root for *adhair* is *adhr-* [aɪr], so there is no depalatalisation in the VN.

We can talk of true depalatalisation only in the case of verbs which end in [lʹ] and [ʃkʹ]. In all paradigms (present, past, future) of these verbs, palatalised stems occur.

(15)

2nd sg. imperative = root	Ind. present	VN
buail	buaileann	bualadh
fáisc	fáisceann	fáscadh
loisc	loisceann	loscadh
troisc	troisceann	troscadh
rúisc	rúisceann	rúscadh
brúisc	brúisceann	brúscadh

We cannot fail to notice that depalatalisation occurs where the stem ends in [ʃkʹ], which in turn is preceded by a back vowel [o uː ɑː]. The pair *buail – bualadh* is also a genuine exception which has to be lexically marked. The attachment of a depalatalised variant cannot be the result of some output phonological constraint, because we also find regular formations, where [ə] is added without depalatalisation:[34]

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[34] In what follows V = root, not the citation form. If we use the citation form, the root will be marked in bold.

(16)   **V**   **VN -isceadh *-scadh**
    aisc 'ask, seek'   aisceadh
    taisc 'lay up, store'   taisceadh
    eisc 'excise'   eisceadh
    gréisc 'grease'   gréisceadh
    faoisc 'shell'   faoisceadh

(17)   **V**   **VN -ileadh *-ladh**
    dáil 'portion out'   dáileadh
    scaoil 'loosen'   scaoileadh
    sil 'loosen'   sileadh
    síl 'think'   síleadh

As the phenomenon of depalatalisation is reduced to a handful of examples, it can be viewed as marginal. The simplest mode of description of verbs which have corresponding VNs in *-(e)adh* [ə], is to say that VNs are formed by adding the suffix to the root of first conjugation verbs, apart from the exceptions mentioned above. We have come across about 6 exceptions to the rule.

There is also a small group of verbs that form their VN by means of the suffix *-e/-a* [ə]. As the verbs in question are mostly monosyllabic and all of them belong to the first conjugation, we may assume that *-(e)adh* and *-e/-a* are orthographic variants representing the same morphological exponent. After all, the pronunciation is decisive. Spelling systems are frequently a matter of convention and cannot be relied on when we wish to establish whether certain forms are related. It is worth noting, however, that in some cases we actually find *-(e)adh* in earlier spelling.

(18)

V	**VN**	**Old orthography**
díbh [dʹiːvʹ] 'dismiss'	díbhe [dʹiːvʹə]	
fair [farʹ] 'watch'	faire [farʹə]	
gáir [gɑːrʹ] 'cry, shout'	gáire [gɑːrʹə]	
ith [ih] 'eat'	ithe [ihə]	itheadh
rinc [riŋʹkʹ] 'dance'	rince [riŋʹkʹə]	rinnceadh
taighd [taidʹ] 'research'	taighde [taidʹə]	taighdeadh
tuil [tilʹ] 'flood'	tuile [tilʹə]	

Our observations can be summarised by the affixation rule below:[35]

(19)	$\exists\, Z : Z = [[X] + \text{ə}]$ if	$[X]_{[\text{V Class 1, monosyllabic}}$	e.g.	glanadh
		$_{\text{or disyllabic ending in k, g, d, r}]}$		ithe
			e.g.	adhlacadh
			e.g.	tuaslagadh
			e.g.	seachadadh
			e.g.	céiliúradh

4.2. Long vowel

Another class of verbs we are going to deal with are monosyllabic verbs terminating in -V*gh* [Vɡ´]. Some of its members and their corresponding VNs display a morphemically conditioned alternation [iɡ´] – [iː] as in *nigh* 'wash' – *ní*. In what follows we shall weigh the pros and cons for regarding the 'internal sandhi' in question as automatic.

Let us first have a look at the data. Monosyllabic verbs terminating in -V*gh* [Vɡ´] whose corresponding VN terminates in a long vowel can be broken down into three groups, the third of which is most numerous. As for these verbs, a traditional grammar such as Ó hAnluain (1999) suggests that *í* is put instead of -*igh* in forms where there is no long vowel or diphthong in the root, e.g. *nigh* 'wash' – *ní* (20a). If the root ends in -*igh*, only the element -*gh* is left out, e.g. *cnaígh* 'gnaw' – *cnaí* (20b). -*igh* is cut off in the case of other verbs ending in -*igh*, e.g. *dóigh* 'burn' – *dó* (20c).

(20)	**Citation form**	**VN**
a.	figh [f´iɡ´] 'weave'	fi [f´iː]
	guigh [ɡiɡ´] 'pray'	guí [ɡiː]
	ligh [l´iɡ´] 'lick'	lí [l´iː]
	luigh [liɡ´] 'lie'	luí [liː]
	nigh [n´iɡ´] 'wash'	ní [n´iː]
	snigh [ʃn´iɡ´] 'flow'	sní [ʃn´iː]
	snoigh [sniɡ´] 'hew'	snoí [sniː]
	suigh [siɡ´] 'sit'	suí [siː]

---

[35] The rule formalism has been adopted from Malicka-Kleparska (1985: 21). The morphophonological operations spelling the morphomic function F_{VN} are to be read in the following way:

$\exists$ there is such a Z (standing for a word form) that Z consists of a basic form, i.e. the verbal root X + suffix/other morphophonological exponent.

b.   caígh [kiːɡ´] 'weep'   caí [kiː]
           cnaígh [kniːɡ´] 'gnaw'   cnaí [kniː]

c.   báigh [bɑːɡ´] 'drown'   bá [bɑː]
           brúigh [bruːɡ´] 'press'   brú [bruː]
           clóigh [kloːɡ´] 'tame'   cló [kloː]
           cneáigh [k´n´ɑːɡ´] 'wound'   cneá [k´n´ɑː]
           crúigh [kruːɡ´] 'milk'   crú [kruː]
           dóigh [doːɡ´] 'burn'   dó [doː]
           dreoigh [d´r´oːɡ´] 'decay'   dreo [d´r´oː]
           luaigh [luəɡ´] 'mention'   lua [luə]
           meáigh [m´ɑːɡ´] 'balance'   meá [m´ɑː]
           pléigh [p´l´eːɡ´] 'discuss'   plé [p´l´eː]
           reoigh [r´oːɡ´] 'freeze'   reo [r´oː]
           sáigh [sɑːɡ´] 'thrust'   sá [sɑː]
           sleáigh [ʃlɑːɡ´] 'spear'   sleá [ʃl´ɑː]
           spréigh [sp´r´eːɡ´] 'spread'   spré [sp´r´eː]
           súigh [suːɡ´] 'absorb'   sú [suː]
           tráigh [trɑːɡ´] 'ebb'   trá [trɑː]
           treáigh [t´r´ɑːɡ´] 'pierce'   treá [t´r´ɑː]

Ó hAnluain does not describe the data, but only their orthography. The process is not uniform: in some cases it consists in attaching a vowel and truncation of the [iɡ´] cluster, whereas in others only the final consonant is truncated. In cases where *-igh* [iɡ´] is subtracted and *í* [iː] is supplied (i.e. in (20a)), the root is divested of all content but the initial consonant (cluster). It is very difficult to envisage a morphological rule of this kind. It is far more plausible that the lexical entry for 'wash' encompasses two variant stems.

    The generalisations above are based on the citation form, which from the theoretical vantage point is the least suitable choice. Our problem comes down to determining the root, which we regard as the starting point for the morphophonological spell-out mechanisms, and the affix/morphophonological operation involved. In order to identify the root, we need to consider the conjugation of *nigh* 'wash' and *crúigh* 'milk' in comparison with a typical representative of the 1st conjugation such as *glan* 'clean'.[36] First conjugation verbs, as we have already noted in 2.2., do not add any vocalic element to the root to form the stem. Hence, the two are identical and in order to arrive at the

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[36] All monosyllabic verbs terminating in *-igh* belong to the first conjugation as they take the *-f-* element to form future forms.

root we only have to subtract inflectional desinences. Let us have a look at singular present indicative forms.

(21)   **I**   **glan** 'clean'   crúigh 'milk' nigh 'wash'
  1. -(a)im   **glan**aim   **crú**im   **ní**m
  2. -(e)ann   **glan**ann tú   **crú**nn tú   **ní**onn tú
  3. -(e)ann   **glan**ann sé, sí   **crú**nn sé, sí **ní**onn sé, sí

When we subtract the person/tense endings in the second column we are simply left with *crú-*. As far as VN formation is concerned, in the case of verbs which contain a long vowel or a diphthong such as *crúigh* 'milk' it would be enough to say that the VN equals the root/stem, i.e. it is formed by adding a zero morpheme to the root. This would mean that the *-igh* cluster in the citation form stands for an inflectional desinence. What we suggest may be formalised as follows:

(22) $\exists Z : Z = [[X] + \emptyset]$ if $[X]_{\text{[V Class 1, monosyllabic -VV]}}$ e.g. crú

  Apparently, this rationale is not applicable to verbs such as *nigh* 'wash'. As we have just seen most present forms contain a long vowel: *ním*, *níonn* etc., but the citation form has a short one. Which is the root – *nigh-* or *ní-*, where does this long vowel come from, and is *-igh* an inflectional marker or an integral part of the root? We have to account for this somehow. According to Bauer (1988: 253) the root is 'the basic part of a lexeme **which is always realised** [emphasis mine – M.B.-T.], and it cannot be further analysed into smaller morphs.' Therefore, if we encounter word-forms with a short vowel, it would be implausible to claim that the root contains a long one, i.e. that it is *ní-*. In addition to this, there are verbs terminating in *-gh* which contain a long *-i* in all word-forms, e.g. *caígh* [kiːgʹ] 'weep', *cnaígh* [kniːgʹ] 'gnaw', *cloígh* [kliːgʹ] 'cleave'. This also suggests that the radical vowel in 'wash' is not long. If it were long, it should be long in the citation form as is the case with the three verbs in question. Alternatively, we can postulate the attachment of a vocalic suffix, i.e. a neutral vowel [ə] to a root, *nigh*. The palatalised stop [gʹ] will then be delinked in the intervocalic context, which in turn will trigger compensatory lengthening of the preceding vowel. If this proposal stands up to closer scrutiny, monosyllabic verbs ending in *-igh* will be legitimate members of the category of monosyllabic verbs which attach [ə] to the root. For example, *nigh* + ə → *ní*. We can then maintain that these are 'regular' first conjugation verbs, where the citation form equals the root. The only difference is that in one case the VN ending [ə] is spelt *-adh*, in others it is indicated merely by the long vowel *-í*. The

disappearance of [gʹ] will then be due to the operation of phonology. It will follow automatically from the general principles defining phonological structure. We must, however, furnish sufficient evidence that the change in question is required by the phonotactic pattern of the language.

4.2.1. Arguments for an automatic alternation

Two linguists of different persuasions – Ó Siadhail (1989) and Cyran (1997) – make a case for consonant loss and compensatory lengthening as an active synchronic phonological rule in Modern Irish. Also Ó Cuív (1944: 110) notes that fricatives exhibit a tendency 'to be weakened and vocalized and lost. This vocalization of fricatives usually results in the lengthening or diphthongization of preceding short vowels'. However, for him the process is diachronic.

Few scholars would now defend the strictly generativist SPE approach to allomorphy in which an abstract underlying form is assumed for the alternants involved and subjected to phonological rules. Chomsky and Halle (1968) constitutes the methodological frame of Ó Siadhail's analysis. It will, therefore, suffer from the shortcomings of the model itself.[37] The underlying representations frequently identical with historical forms are established to 'derive the required forms in the major dialects, with a minimum of generally applicable rules' (Ó Siadhail 1989:16). The proposed underlying forms are often too far removed from their respective surface forms.[38]

That is why we prefer to choose Cyran (1997) as a point of reference for our further investigation. His analysis is restricted to one dialect (Munster Irish) and carried out in the model of Government Phonology which is a non-transformational framework, where phonological processes are viewed as static constraints on well-formed structures.

Traditionally, the term compensatory lengthening means lengthening as a result of consonant loss. In Cyran (1997: 154-156) it has been demonstrated that structurally compensatory lengthening is in fact nuclear fusion following the loss of an intervocalic consonant. Consider his representation of *ubh* [uv] / *uibhe* [iː] 'egg/gen.sg.'.

(23)

$$
\begin{array}{ccccccc}
N & O & N & & N & O & N \\
| & | & | & & | & | & | \\
x_1 & x_2 & x_3 & & x_1 & x_2 & x_3 \\
| & | & | & & & & \\
u & v & \emptyset & & & I/U &
\end{array}
$$

---
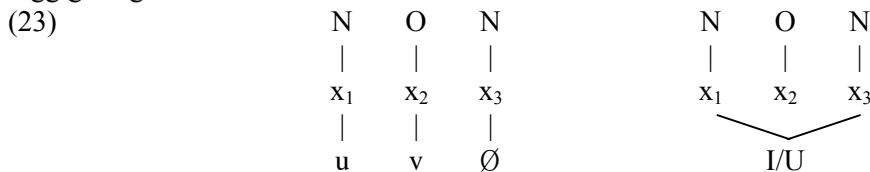
[37] For more details see, e.g. Lass (1984) or Gussmann (2000).

[38] Cf. our discussion of the ending *-dh* [ɣ], which Ó Siadhail evokes to account for the form *ardú* (section 3.). Synchronically, there is no sign of this ending.

The intervocalic consonant (onset x_2) is deleted, which yields a vowel constituted by two consecutive nuclei. The delinking can be effected only if the second nucleus (x_3) is realised phonetically, yielding [iː].

To support this view Cyran (1997: 148-153) uses alternations of the type VC(V) > VV, which may be viewed as suppression of the intervocalic consonant and subsequent compensatory lengthening. The resulting vowel is always either [uː] or [iː] as in (24a) and (24b) respectively.

(24)

a.   talamh / talmhan (talún)   'land / gen.sg.'
     [tɑləv] / [tɑluːn]

     ollamh / ollamhna (ollúna)   'professor / pl.'
     [oləv] / [oluːnə]

b.   ubh / uibhe   'egg / gen.sg.'
     [uv] / [iː]

     tigh / tighe (tí)   'house / gen.sg.'
     [tʹigʹ] / [tʹiː]

Cyran concludes that the quality of the final vowel is contingent not so much on the place defining element of the delinked consonant (in generative terms – the feature defining the place of articulation) as on its secondary place specification, i.e. whether it is palatalised or velarised. The form [tɑˈluːn] results from the addition of the genitive singular ending *-an* as in *teanga – teangan* 'language/gen.sg.', i.e. [tɑləv] + ən → [tɑluːn]. Turning now to (24b), [ə] is another genitive singular ending as in *cos – coise* 'leg/gen.sg.'. In Munster *uibhe* is pronounced as [iː], and not as one might expect as [ivə]. Cyran concludes that in the intervocalic context [vʹ] and [gʹ] tend to be lost, which entails the fusion of the flanking nuclei.

Apart from the arguments above we have found some more cases where the same effects are observed. Let us first consider the formation of genitive forms of adjectives. Masculine forms are formed by the palatalisation of the final consonant, whereas feminine forms arise due to the palatalisation of the final consonant and the addition of a vowel as in:

(25a)   bog [boɡ]   boig [bigʹ]   boige [bigʹi]
        'soft'   'soft-gen.sg.masc.'   'soft-gen.sg.fem.'

What happens in the case of adjectives ending in -*ach* confirms Cyran's observation. Palatalisation of the final consonant yields -*aigh* [əgʹ]. Further addition of a vowel results in consonant delinking, followed by the fusion of nuclei, i.e. [əgʹ] + [ə] → [iː] as in:

(25b)   déanach [dʹianəχ]   déanaigh [dʹianəgʹ]   déanaí [dʹiaˈniː]
            'late'   'late-gen.sg.masc.'   'late-gen.sg.fem.'

Furthermore, in the old orthography the form *déanaí* was represented as *déanaighe*.

   The formation of the comparative degree of adjectives terminating in -*ach* [ɑχ] also supports our claim. In order to form the comparative of some adjectives in Irish, we need to palatalise the final consonant and add a vowel, e.g. *ard – airde* 'high/ comp.' or *geal – gile* 'bright/ comp.'. In the case of adjectives terminating in -*ach* [ɑχ] we observe the same effects as in the case of adjective declension.

(26)   **Adjective**   **Comparative**
         déanach [dʹianəχ] 'late'   níos déanaí [dʹiaˈniː]
         díreach [dʹiːrʹəχ] 'straight'   níos dírí [dʹiː ˈrʹiː]
         aisteach [aʃtʹəχ] 'strange'   níos aistí [aʃˈtʹiː]
         iontach [uːntəχ] 'wonderful'   níos iontaí [uːnˈtiː]

   What is more, consonant delinking and vowel lenghtening can be observed when the verbs in question are inflected. The forms of the past tense demonstrate that *nigh* shows a close affinity to verbs such as *glan*, discussed in the preceding section.

(27)   **glan 'clean'**   **nigh 'wash'**
         1.   ᴸ - as   ghlanas   níos (nigh + as)
         2.   ᴸ -ais   ghlanais   nís   (nigh + is)
         3.   ᴸ -Ø   ghlan sé, sí   nigh sé, sí

Only if the desinence begins with a vowel, do we observe compensatory lengthening effects.

4.2.2. Arguments against an automatic alternation
Before we turn to counter-arguments let us briefly comment on the points made so far. Cyran's observations regarding compensatory lengthening effects can be put into question due to the fact that he bases his argument on a few nominal

alternations which display a limited subregularity. The formation of the plural and in some cases that of the genitive is exception ridden, hence lexicalised. Without the old spelling the regularity would not be detectable, as in the lexicalised pair *tigh – tí* (24b). Even in Munster we find plural forms which do not follow the proposed pattern, e.g. *luibh* [liv′] 'herb' – *luibheanna* 'herb, pl.' which is pronounced as [liv′ənə] and not as *[liːnə]. As far as the declension of adjectives is concerned, the argument assumes (only on the basis of old orthography) that the declension of adjectives in *-ach* is the same as that of e.g. *bog*. Furthermore, in phonological terms palatalisation of [əχ] should yield [əχ′] rather than [əg′]. There is also the question why the form *boige* [big′i] at all surfaces, as the addition of a vocalic suffix should yield [biː].

The major argument for was that the change occurs in paradigms, where *-igh* is followed by a vowel. This generalisation, however, is not absolute. Compare the 2nd person imperative singular and plural. In the case of monosyllabic 1st conjugation verbs such as *cuir* and *glan*, no ending is added to the root in the singular, whereas to form the plural the ending beginning with a vowel is employed.

(28a) **2nd person singular imperative**   **2nd person plural imperative**
     glanØ [glɑn]   glan**aig** [glɑnəg′]
     cuirØ [kir′]   cuir**ig** [kir′ig′]

If the same endings are added to verbs from (20a), we do not observe the expected compensatory lenghthening effect in the plural.

(28b) **2nd person singular imperative**   **2nd person plural imperative**
     suighØ [sig′]   suigh**ig** [sig′ig′]   *suíg [siːg′]

Our analysis runs into trouble in the future, where the final consonant is not intervocalic, and yet the vowel is long, i.e. *nigh* + *-fidh* [hig′] → *nífidh*. The same happens before the verbal endings with an initial consonant in the conditional, e.g. *-f(e)adh nigh* + *-feadh* [həχ] → *nífeadh* (cf. Ó Siadhail 1989: 48-50).

If we argue for an automatic phonological process, we are also hard put to account for the present indicative forms of some other first conjugation verbs whose root terminates in [g′]:

(29)   **Verb**   **1ˢᵗ person sg. present indicative**
        lig [lʹigʹ] 'let'   ligim [lʹigʹəm]
        tuig [tigʹ] 'understand'   tuigim [tigʹəm]
        baig [baɡʹ] 'bag, heap'   baigim [baɡʹəm]
        ruaig [ruəɡʹ] 'chase'   ruaigim [ruəɡʹəm]
        gróig [ɡroːɡʹ] 'huddle'   gróigim [ɡroːɡʹəm]

If the change Vɡʹ + V → VV is automatic these forms should not exist. The same holds for feminine nouns terminating in a palatalised consonant and their corresponding genitive case formed by the addition of -*e*.

(30)   **Nominative**   **Genitive**
        cnaig [knaɡʹ] 'scowl'   cnaige [kniɡʹə]
        braig [braɡʹ] 'brag'   braige [briɡʹə]
        claig [klaɡʹ] 'dent, hollow'   claige [kliɡʹə]
        graig [ɡraɡʹ] 'hamlet'   graige [ɡriɡʹə]
        meig [mɛɡʹ] 'bleat'   meige [mɛɡʹə]

Glaring counter-examples such as these render the entire process of consonant delinking unnatural phonetically, as purely phonological processes apply whenever the conditions for them are satisfied.

    In conclusion, we can say that the relevant generalisation does not hold across the board so it cannot be accounted for by the phonological component. Synchronically, it should be viewed as segment replacement. It is a morphological fact that sometimes *ni-* and sometimes *ní-* appears. Both allomorphs must be listed for an enumerable set (20a lists all representatives) and their distribution must make reference to grammatical information. A short vowel appears in second person imperative singular and plural (*nigh* [nʹigʹ] and *nighigh* [nʹigʹəgʹ]), in the present autonomus form *nitear* [nʹitər] and in the verbal adjective, i.e. past participle *nite* [nʹitʹə]. Otherwise a long vowel appears in the root (cf. Ó Sé 2000). It transpires that what is often claimed to be phonology falls within the domain of morphology. Verbal nouns of monosyllabic verbs which contain a long vowel or a diphthong equal the root as depicted in (22). VNs of monosyllabic verbs terminating in -*igh* (those from (20a)) are listed.

4.3. Palatalisation (forms in -áil [ɑːlʲ])

4.3.1. Lexically marked items
VNs ending in *-áil* fall into two categories. The first comprises old, well-established forms, which have fully specified entries in the lexicon. All we can do is identify the formal exponent involved. The second category of *-áil* forms results from the operation of synchronic rules of word formation. Needless to say, our discussion will centre on the latter.

The following 7 forms have to be listed in the lexicon:

(31)	**Verb**	**VN**
	1ˢᵗ Conjugation	
	faigh [fagʲ] 'get'	fáil [fɑːlʲ]
	fuaigh [fuəgʲ] 'sew'	fuáil [fuːɑːlʲ]
	gabh [gɑv] 'take'	gabháil [gɑvɑːlʲ]
	2ⁿᵈ Conjugation	
	admhaigh [ɑdvəgʲ] 'acknowledge'	admháil [ɑdvɑːlʲ]
	coinnigh [konʲigʲ] 'keep'	coinneáil [konʲɑːlʲ]
	teagmhaigh [tʲagvəgʲ] 'meet'	teagmháil [tʲagvɑːlʲ]
	teastaigh [tʲastəgʲ] 'be wanted'	teastáil [tʲastɑːlʲ]

The forms above can only be of interest to diachronic researchers. For example, Ó Cuív (1980) points to the verb *gabh* (O.I. *gaibid*) and its numerous compounds as their forerunner. The spread of the *-áil* morpheme is seen in Mid. Ir. Synchronically, we can only say that the formal exponent involved is *-áil* and that it is attached to the roots of the seven lexically marked verbs. The forms that we are going to deal with next also terminate in *-áil*, but the verbs differ from those in (31) in that their root already contains *-ál*.

4.3.2. Forms in -áil resulting from productive morphological rules
The second category of VNs terminating in [ɑːlʲ] are those whose corresponding Vs end in the same sequence; or to be more precise the citation form of the verbs ends in *-áil*. VNs in [ɑːlʲ] are an interesting group because they are generated by two productive derivational processes. The first uses English verbs as bases, and the second operates on native nouns.

4.3.2.1. Borrowings from English
Almost any English verb provided it is no more than three syllables long (Doyle 1992: 99) can be borrowed into Irish by adding [ɑːl].

(32)	**English Verb**	**Irish Verbal Root**	**VN**
	bake ['beik]	bácál- [bɑːkɑːl]	bácáil [bɑːkɑːlʹ]
	pack ['pæk]	pacál- [pɑkɑːl]	pacáil [pɑkɑːlʹ]
	save ['seiv]	sábhál- [sɑːvɑːl]	sábháil [sɑːvɑlʹ]
	drive ['draiv]	draibheál- [draivɑːl]	draibheáil [draivɑːlʹ]
	train ['trein]	traenál- [treːnɑːl]	traenáil [treːnɑːlʹ]
	paint ['peint]	péinteál- [pʹeːnʹtʹɑːl]	péinteáil [pʹeːnʹtʹɑːlʹ]
	rob ['rob]	robál- [robɑːl]	robáil [robɑːlʹ]
	sack ['sæk]	sacál- [sɑkɑːl]	sacáil [sɑkɑːlʹ]
	drill ['drıl]	druileál- [drilʹɑːl]	druileáil [drilʹɑːlʹ]
	plaster ['plɑːstə]	plástrál- [plɑːstrɑːl]	plástráil [plɑːstrɑːlʹ]

The process of borrowing English verbs seems to consist in taking an English verbal root and forming an Irish root/stem by appending *-ál* [ɑːl] to it. The rule deriving native verbs from English ones could be adumbrated as follows[39]:

(33) $\forall : [X]_{[V, + foreign]} : [X] \rightarrow [[X] + \text{suffix}]_{[V, \text{Class 1}, + native]}$

   $\exists Z: Z = [[X] + \text{ál}]$ e.g. bácál-
   /there is such/

The resulting verb belongs to the 1st conjugation, where the general stem (in bold print) equals the root, e.g.

(34)   1. **bácál**aim   1. **bácál**aimid
       2. **bácál**ann tú   2. **bácál**ann sibh
       3. **bácál**ann sé sí   3. **bácál**ann siad

For the 2nd conjugation we make a distinction between the root (*ceann-*) and the stem (*ceannaí-*). However, *-ál* is different from the theme vowel, which is attached to form the stem of 2nd conjugation verbs. It is an integral part of the root. In this analysis we adopt Stump's (2001: 278) definition of the root. For him 'a root may or may not be morphologically unanalysable, since a lexeme

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[39] Once more we take the notational devices from Malicka-Kleparska (1985).
The rule consists of the following elements:
$\forall$: – Quantifier 'for every X'
X – symbol to be replaced with a lexical item possessing the feature complex
$[[X] + \text{suffix}]_{[V, \text{Class 1}, + native]}$ – the derivational operation which specifies that foreign verbs are changed into native counterparts by the addition of a suffix.

arising by a rule of derivation or compounding will ordinarily have a root which is morphologically complex; thus roots are basic only in the inflectional sense of lacking overt inflectional exponents'.

The morphophonological rule marking products of abstract inflectional operations forming non-finite forms and derivational operations forming nominalisations from Verbs Class 1 ending in *-ál* can be formalised as follows:[40]

$$(35) \quad \exists\, Z : Z = [[X] + \emptyset^P]\ \ \text{if } [X]_{[V]} = [Y\alpha{:}l] \qquad \text{e.g. } bácáil$$

4.3.2.2. De-nominal verbs

The verb-forming suffix *-ál* [ɑːl] is used to borrow English verbs on the one hand, and to derive verbs from nouns on the other. In the latter case, its function is denominal, mostly with an instrumental meaning, where the underlying nouns may be native or English (Wigger 1972: 207-210). The meaning of the resulting verb can be paraphrased as 'make, do X or have something to do with X'.

The semantic relation existing in pairs N → V is far more difficult to pinpoint than in pairs where the direction of motivation is reversed. Analyses of paraphrases characterising the verbs in question have yielded lists of various semantic categories. For example Marchand (1968: 368) claims that 'denominal verbs are verbalised sentences', distinguishing four semantic patterns characteristic of N → V conversion, depending on the role played by the nominal base of the zero derived verb in the sentential analogue: predicate-subject complement type, predicate-object complement type, predicate-adverbial complement type, and predicate-object type.

This division dovetails with Clark and Clark's (1979) classification, in which 8 fundamental sense groups, namely: Locatum, Location, Duration, Agent, Experiencer, Source, Goal and Instrument Verbs are established, and a ninth group of miscellaneous verbs.

Aronoff (1980) voices the opinion that all that can be said about the meaning of the denominal verb is that it is connected with the noun. The lack of a fixed meaning has led some linguists to dismiss semantic considerations and conclude that '(…) to change a nominal root into a verbal form, it is sufficient simply to use it as a V, attaching standard verbal tense/aspect/mood and person morphology directly to it' (Hopper and Thompson 1984: 745).

According to Beard (1995: 184-185) there is a productive grammatical process in many languages which turns nouns into verbs by means of equipping the base noun with the features of Verb Class and Transitivity. The specific

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[40] $\emptyset^P$ does not stand for a zero morpheme. This notational device is meant to indicate that the terminal segement of the verbal root undergoes palatalisation.

semantic output of the derivation is predictable from the semantic representation of the base. Verbs derived from nouns which are lexically instruments: *to hammer*, *to brush*, *to knife*, have very predictable meanings: 'to use X, X = some instrument, in accord with its natural function'. The diversity of semantic interpretations of denominal verbs stems from the variety of lexical meanings denoted by their bases.

   As far as the formal aspect of verbalisation is concerned, in English nouns may be used as verbs without any overt morphological marking, whereas in Polish this process involves the addition of a stem-forming element *-owa-* to the root (cf. Szymanek 1988: 35-36), e.g. *butelka* 'a bottle' – *butelkować* 'to bottle'. This operation is regarded as transpositional as its sole function is to cause category shift. In Irish the root/stem forming element *-ál* is employed.

(36) **N**   **V**   **VN**
      buama 'bomb'   buamál- 'bomb'   buamáil
      [buəmə]   [buəmɑːl]   [buəmɑːlʹ]
      ionramh 'management'   ionramhál- 'handle'   ionramháil
      [inrəv]   [inrəvɑːl]   [inrəvɑːlʹ]
      planda 'plant'   plandál- 'plant'   plandáil
      [plɑndə]   [plɑndɑːl]   [plɑndɑːlʹ]
      tairne 'nail'   tairneál- 'nail'   tairneáil
      [tɑːrnʹə]   [tɑːrnʹɑːl]   [tɑːrnʹɑːlʹ]
      vóta 'vote'   vótál- 'vote'   vótáil
      [voːtə]   [voːtɑːl]   [voːtɑːlʹ]
      sonc 'poke'   soncál- 'poke'   soncáil
      [soŋk]   [soŋkɑːl]   [soŋkɑːlʹ]
      burla 'bundle'   burlál- 'bundle'   burláil
      [buːrlə]   [buːrlɑːl]   [buːrlɑːlʹ]
      sprae 'spray'   spraeál- 'spray'   spraeáil
      [spreː]   [spreːɑːl]   [spreːɑːlʹ]
      lód 'load'   lódál- 'load'   lódáil
      [loːd]   [loːdɑːl]   [loːdɑːlʹ]

The rule in question can be sketched as follows:

(37) $\forall : [X]_{[N]} : [X] \rightarrow [[X] + \text{suffix}]_{[V, \text{Class 1}]}$

        $\exists Z: Z = [[X] + \text{ál}]$ e.g. lódál-
        /there is such/

The resulting verbs have the following root/stem: [[Y] + ɑːl]. As these verbs also belong to the 1ˢᵗ conjugation and their root/stem terminates in -*ál*, the same non-affixal operation as the one in (35) is responsible for the formation of non-finite forms and nominalisations. This rule operates both on simple verbs and those which involve a morpheme boundary. It is sensitive to the final phonetic string only.

(38) $\exists\, Z : Z = [[X] + \emptyset^{P}]$ if $[X]_{[V,\,Class\,1]} = [Yɑːl]$ e.g. bácáil, lódáil

However, the highly productive rules in (33) and (37) do not account for all -*áil* forms. A discussion of numerous abstract nouns in -*áil* which have no corresponding finite verb forms, but some of which are attested in VN usage, will be found in the following section.

4.3.3. Forms in -áil which apparently lack verbal sources

4.3.3.1. Introduction

There are about 100 abstract nouns for which no corresponding verbs are attested (cf. Ó Cuív 1980: 128). For example, Ó Dónaill lists *boirbeáil* '(act of) threatening, gathering, heightening' as a nominalisation which can discharge the function of the VN (i.e. the present participle) – *ag boirbeáil* 'threatening'. Forms such as, for instnace, *slabáil* '(act of) puddling, sloppy work' are even more numerous. They are listed only as nominalisations and ÓD does not give an example with the particle *ag*, hence it is not clear whether this can be used as an active participle or not. In both cases there are no corresponding verbal entries or examples of finite usage. We set out to demonstrate that the one hundred forms of this kind are not in any way exceptional and have verbal sources as well. The reduction of the number of these pseudo-baseless lexemes is, among other things, possible if we recognise the existence of the Conditional Lexicon, which is a repository of all potential words produced by regular processes (cf. Allen 1978, Malicka-Kleparska 1985, 1987).

In the following subsections we classify the forms in -*áil* listed in Doyle and Gussmann (1996), and then demonstrate that the distinctions between them are in fact spurious and all -*áil* forms should be treated uniformly.

4.3.3.2. Nominalisations with corresponding verbs

In the majority of cases (those discussed in the preceding section – 4.3.2) forms in -*áil* have corresponding verbs. We divide them into two groups.

First, there are about 90 verbs with no corresponding motivating nouns, though in some cases we can point to English sources. We can observe the following pattern for these verbs:[41]

(39)

English source	N	V	VN	Nominalisation
*	*	piardál- 'ransack'	ag piardáil	piardáil 'ransacking'
smooth	*	smúdál- 'iron'	ag smúdáil	smúdáil 'ironing'
*	*	cúigleál- 'cheat, embezzle'	ag cúigleáil	cúigleáil 'cheating (at cards), embezzlement'
train	*	traenál- 'train'	ag traenáil le haghaidh an chluiche 'training for the match'	traenáil 'training'
*	*	friothál- 'attend, minister'	ag friotháil	friotháil 'attention, ministry'
sprig	*	spruigeál- 'sprig, embroider'	ag spruigeáil	spruigeáil 'sprigging, embroidery'
plead	*	pléadál- 'plead, dispute, wrangle'	ag pléadáil faoi thalamh 'wrangling about land'	pléadáil 'disruption, plea, wrangle'
pave	*	pábhál- 'pave'	ag pábháil	pábháil 'paving, pavement'
sink	*	suncál- 'sink, invest'	Bhí an long ag suncáil. 'The ship was sinking.'	suncáil 'sinking'

Second, there are about 180 verbs with corresponding source nouns, which can be depicted diagramatically as follows:

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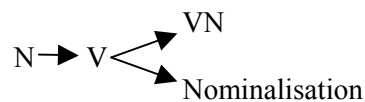
[41] In this section we do not use the asterisk '*' to denote an ungrammatical form. We wish to indicate in this way that the form is unattested or, to be more precise, not listed in ÓD.

(40)

N	V	VN	Nominalisation
paca 'pack'	pacál- 'pack'	ag pacáil	pacáil 'packing'
raca 'rack'	racál- 'rack, give a hiding'	ag racáil	racáil 'racking pains, torture'
ráca 'rake'	rácál- 'rake'	ag rácáil	rácáil 'rakings, raked material'
raic 'wreck'	raiceál- 'wreck'	ag raiceáil	raiceáil 'wrecking, wreck, maltreatment'
cic 'kick'	ciceál- 'kick'	ag ciceáil	ciceáil 'kicking'
guaille 'shoulder'	guailleál- 'shoulder, jostle with shoulder'	ag guailleáil a chéile 'shouldering one another'	guailleáil 'shouldering, jostling'
scim 'film, thin coating'	scimeál- 'skim'	ag scimeáil ar an uisce 'skimming over the water'	scimeáil 'skimming'
dorn 'fist'	dornál- 'fist, box, beat sb with fists'	ag dornáil	dornáil 'fist fighting, boxing'
tuairt 'thud, crash'	tuairteál- 'pound, thump, buffet'	ag tuairteáil a chéile 'bumping against each other'	tuairteáil 'pounding, beating'
súiste 'flail'	súisteál- 'flail, thrash'	ag súisteáil	súisteáil 'flailing, beating'

Not all verbs in *-áil* have corresponding simple nouns because, as we have already observed, some are modelled on English verbs. Whatever the derivational history of the verb, the VN and the nominalisation have a verbal source.

All in all, we have found about 270 forms which have corresponding verbs.

4.3.3.3. Nominalisations which can function as VNs

This category contains abstract nouns both native (41a) and foreign (41b) in origin, which are listed in Ó Dónaill together with their verbal noun usage, i.e. they can function as present participles. No finite verbal forms are attested in Ó Dónaill. The tables below present those abstract nouns which have been found in this source.

(41a)

N	N in -áil	VN
boirbe 'fierceness'	boirbeáil 'threatening'	Tá sé ag boirbeáil chun stoirme. 'The storm is gathering.'
paidhc 'poky place'	paidhceáil 'poking'	Bhí sé ag paidhceáil roimhe sa dorchadas. 'He was probing his way in the dark.'
speic 'sidelong glance'	speiceáil 'looking furtively'	ag speiceáil ar dhuine 'looking furtively at sb'
slaimice 'untidy person'	slaimiceáil 'messing'	ag slaimiceáil chugat 'gathering things up in an untidy manner'
righne 'slowness'	righneáil 'lingering, loitering'	bheith ag righneáil le rud 'be slow in doing sth'
séirse 'rush'	séirseáil 'hurrying'	ag séirseáil thart 'rushing around'
gleo 'noise'	gleotháil 'noisiness'	ag gleotháil 'making a noise'
fadhb 'knot in timber, lump from blow'	fadhbáil 'striking, slogging'	ag fadhbáil ar na clocha 'hammering away at the stones'
tointe 'thread, stitch'	tointeáil 'throwing the shuttle'	Bhíomar ár dtointeáil anonn is anall. 'We were being shuttled back and forth.'
stríoc 'streak, stripe, line'	stríocáil 'scoring, dawdling lines'	Níl tú ach ag stríocáil an talaimh. 'You are only scratching the surface of the ground.'
ríf 'fuss'	rífáil 'fussing, silly talk'	ag rífáil thart 'fussing about'
fáinne 'ring, circle'	fáinneáil 'circling, fluttering about'	ag fáinneáil timpeall 'circling round, loitering about'
méar 'finger'	méarnáil 'groping'	ag méarnáil sa dorchadas 'groping in the darkness'
spreota 'length (of timber), chop'	spreotáil 'hacking, chopping, muddling, messing'	ag spreotáil ar chrann 'hacking at a tree' ag spreotáil ar obair 'messing with work'
margadh 'market, bargain'	margáil 'bargaining, haggling'	ag margáil le duine 'bargaining with sb'
fútar 'fidgety person, bungler'	fútráil 'fidgeting, bungling'	ag fútráil le rudaí 'pottering about with things'

múta 'worthless person, lout'	mútáil 'fumbling, pottering'	ag mútáil thart 'groping, pottering around'
iomlat 'movement to & fro'	iomlatáil 'inconsistency, incoherence'	ag iomlatáil le scéal 'beating about the bush'
piast 'worm'	piastáil 'writhing, restlessness'	Tá an aimsir ag piastáil chun báistí. 'The weather is changing gradually to rain.'
slabhra 'chain'	slabhráil 'shuffling, trudging'	ag slabhráil liom 'dragging my feet along'
ciapadh 'tormenting, annoyance'	ciapáil 'strife, contention, annoyance'	ag ciapáil (le) 'contending with, causing annoyance'
trasna 'across'	trasnáil 'crossing, contradicting'	Ná bí i gconaí ag trasnáil orm. 'Don't be contradicting me all the time.'
stráca 'flamboyance, conceit'	strácáil 'striving, struggling'	ag strácáil leis an saol 'struggling with life'
droim 'back'	dromadáil 'walking backwards'	ag dromadáil (thart) 'walking backwards, sideways (like a crab)'
<Eng. job	siobáil 'pottering'	ag siobáil timpeall an tí 'doing odd jobs about the house'

N	N in -áil	VN
*	réachtáil 'running'	ag réachtáil i rás 'running in a race'
*	tiortáil 'knocking about, rough treatment'	Ná bí do do thiortáil féin mar sin. 'Don't knock yourself about like that.'
*	seoráil 'fish. trolling'	ag seoráil pollóg 'trolling for pollock'
*	gliúmáil 'peering, fumbling, groping, slow movement'	Tá an bád ag gliúmáil léi siar. 'The boat is slowly going westwards.'
*	útamáil 'fumbling, groping, bungling, pottering'	ag útamáil le rud 'fumbling with sth'
*	cargáil 'jostling, wrestling, rough treatment'	ag cargáil le rud 'wrestling with sth'
*	máinneáil 'rolling gait, loitering'	Bhí sé ag máinneáil leis. 'He was rolling along.'
*	geidineáil 'petty chores, errands'	ag geidineáil thart 'doing small jobs, pottering'

*	cáibleáil 'knocking about'	Bhí sé á cháibleáil san uisce. 'He was being tossed about in the water.'
*	prócáil 'probing, poking, pottering'	ag prócáil thart 'poking here and there, pottering about'
*	iomrascáil 'wrestling'	ag iomrascáil faoin oidhreacht 'wrangling about the inheritance'
*	crácáil 'hardship, grind'	ag crácáil le 'toiling at, struggling with'
*	rábáil 'fast, unmethodological work'	ag rábáil ó mhaidin go hoíche 'slogging from morning till night'
*	giurnáil 'light work'	ag giurnáil 'doing odd jobs'

(41b)

N	N in -áil	VN
praghas 'price'	praghsáil 'pricing, bidding'	ag praghsáil ar a chéile 'bidding against each other'
séap 'shape'	seápáil 'shaping, posturing'	ag seápáil chun troda 'shaping up for a fight'
stampa 'stamp'	stampáil 'stamping with feet, jerking spasmodically, stumping, struggling along'	Ná bí ag stampáil sa chathaoir. 'Don't throw yourself about in the chair.'
<Eng. pelt	peilteáil 'pelting'	Tá sé ag peilteáil leis. 'He is pelting away, speeding along.'
<Eng. mess	méiseáil 'messing, slopping'	ag méiseáil le rudaí 'messing about with things'
<Eng. thrash	traiseáil 'thrashing, beating'	ag traiseáil a cheile 'thrashing each other'
<Eng. single	singleáil 'thinning, singlings'	ag singleáil tornapaí 'thinning turnips'
<Eng. throng	trangláil 'thronging'	ag trangláil an tí 'cluttering up the house'
<Eng. mooch	múitseáil 'mooching'	ag múitseáil thart 'mooching, loitering about'
<Eng. mob	mabáil 'mobbing, assemblying in a mob'	ag mabáil thart ansin 'congregating around here'

The way the data are presented in Ó Dónaill gives one the impression that abstract nouns are related to the less complex (native or English) nominal forms in the first column. We will claim that even though the simple nouns share their

root with corresponding abstract nouns in *-áil*, the two forms are not derivationally related. The meaning relationships between the forms belonging to the two series is not coherent. For example, the form in *-áil* can be interpreted as 'doing what is characteristic of N' if the corresponding simple N designates a person, e.g. *slaimice* 'untidy person' – *slaimiceáil* 'messing'; on the other hand, it can mean 'making, producing N', e.g. *séirse* 'rush' – *séirseáil* 'hurrying'; 'using N' as in *méar* 'finger' – *méarnáil* 'groping'. It is very difficult to establish the relation between the following pairs: *fadhb* 'knot in timber, lump from blow, lump raising blow' – *fadhbáil* 'striking, slogging' or *tointe* 'thread, stitch' – *tointeáil* 'throwing the shuttle'. Theoretically, a lack of semantic coherence does not imply the lack of derivation. However, this is more true of denominal verbs rather than denominal nouns. The semantic relationships between the less compex nouns and their *-áil* counterparts do not follow the typical derivational N → N patterns (cf. Szymanek 1988: 178-180, Szymanek 1989: 135-211). The major denominal noun categories designate collective names, female names, diminiutive and augmentative formations. The semantics of abstract nouns is more or less uniform, i.e. '(act of) V-ing'. We must be dealing here with deverbal rather than denominal formations. There must exist verbal sources for the abstract nouns and it is possible that these verbal bases are de-nominal. Thus, as the abstract noun and the corresponding simple noun are not derivationally related, there is no need to draw a distinction between subgroups (41a) and (41b).

All in all, Ó Dónaill records about 50 abstract nouns in *-áil* which can also function as VNs, i.e. present participles. The semantics of the forms in (41b) shows that VNs could be modelled on English present participles. This interpretation finds some support in dialectal studies. O'Rahilly (1932: 160) writes that the main use of *-áil* in Mod. Ir. and in Manx is as the ending of the verbal noun of verbs derived from English. Ordinarily the termination used in Scottish for verbs borrowed from English is *-ig* or *-inn* from English *-ing*, e.g. *cuibhrig* 'cover', *robaig* 'rob'. Ó Cuív (1980: 143) says 'I have suggested a possible connection between the -áil ending in *gíostáil* and the -ing ending of English' and cites 'ceiling' – 'síleáil'. What could have happened in the case of the forms in (41b) is that English *price* was borrowed as *praghas*, and by analogy *pricing* was borrowed as *praghsáil*. Then, e.g. English *mobbing* could have been borrowed as *mabáil* without corresponding V (*mob*) or N (*mob*). This would also explain why the VN form is so prevalent: the source is English V-ing, not English V, or English N. Even where there is a corresponding Irish N, the VN in *-áil* does not have to be derived from it. The connection between Irish *praghas* and *praghsáil* may be simply etymological. This phenomenon is not uncommon cross-linguistically. For example, Booij (2002: 78) describes pseudo-

participles in Dutch, which are the result of the borrowing and formal adaptation of their French equivalents. However, the process of borrowing does not include their corresponding verbal bases. This would suggest that the VN usage is, in fact, primary, and it is the abstract nominalisations that are derived from them rather than vice versa.

An etymological account of how new forms enter the language is one thing and their status in the overall system is another. In the model of morphology we advocate here it is not possible to have a nominalisation or inflectional form of the verb without the actual or potential verbal root existing in the language. In our case, the verbs in question may simply lack an appropriate dictionary entry. Even though Ó Dónaill (1977) is the most comprehensive Irish-English lexicon, it is fairly limited as far as the actual examples of usage are concerned. It is nowhere near as thorough and extensive as the OED. We will claim that the forms in *-áil* which can function as VNs have corresponding verbs, despite the fact that they lack corresponding verbs in ÓD. What we mean by this is that no finite or infinitive forms are attested. How do we account for the fact that they feature only as present participles? Biber *et al.* (1999: 471) demonstrate that lexical associations play a part in the formation of the progressive aspect. It is a fact of English grammar that certain verbs are non-continuous verbs, i.e. they never occur in the progressive. By the same token, we should recognise the existence of verbs which are inherently imperfective. Many of the verbs above describe sloppy, casual ways of doing things, and are highly colloquial. Therefore, we expect them to occur in the progressive. In addition to this, the finite or infinitive use may be possible. If some of these verbs are indeed modelled on English *-ing* forms the present participle use is dominant at first. As these forms become more and more integrated in the language their finite and infinitive use develops. The *-áil* forms in (39), which boast verbal dictionary entries and can be related to English sources can serve as an example of this. In sum: the lack of verbal forms other than participles may be due to the lexical characteristics of the verbs in question and/or may simply be due to the scarcity of language data in the dictionary concerned.

4.3.3.4. Nominalisations without verbal sources

About 140 abstract nouns lack corresponding verbs in ÓD. What we mean by this is that neither the finite form nor the present participle are attested. Yet the majority are glossed as '(act of) V-ing', which seems suspicious if there is no verbal base available. We can distinguish 3 subgroups within this category.

In the first, we will find about 40 forms which have other meanings than the verbal one. They are deadjectival, denominal or non-compositional, i.e. the sequence *-áil* belongs to the root. We will exclude them form our discussion

because no link with verbs can be established. Wherever *-áil* functions as a suffix, it must be an exponent of a WFR distinct from the one which produces de-verbal nominalisations. Where *-áil* appears to belong to the root, no morphological processes are involved.

(42)

Base	V	Abstract Noun in -áil
*	*	stalacáil 'squaliness'
*	*	síleáil 'severe hardship, trial'
*	*	eidimeáil 'tattered, wretched appearance'
*	*	údramáil 'whispered talk, conspiracy'
<Eng. sure	*	siúráil 'assurance'
*	*	siobráil 'mist, drizzle'
*	*	formáil 'hire, wages'
tuairisc 'information'	*	tuarascáil 'account, report'
mór 'big'	*	móráil 'pride, vanity'
rúm 'room, space'	*	rúmáil 'roominess, space'
fuar 'cold'	*	fuaráil 'coolness, indifference'
crua 'hard'	*	cruáil 'hardship, adversity'

The second group contains abstract nouns in *-áil* which can be related to other forms (43a) or appear to be non-compositional (43b). Their semantics is uniform '(act of) V-ing'. Both lists contain mainly native words.

(43a)

N	V	Abstract Noun in -áil
spreab 'spadeful'	*	spreabáil '(act of) turning sods, digging'
slaba 'mud, slob'	*	slabáil '(act of) puddling, sloppy work'
bulc 'bulk, mass'	*	bulcáil '(act of) heaping, stacking'
leidhce 'blow'	*	leidhceáil '(act of) beating'
buaic 'highest point'	*	buaiceáil '(act of) showing off, swagger'
taoisc 'gush, flow, downpour'	*	taoisceáil '(act of) vomiting'
scuaid 'splash, sloppy person'	*	scuaideáil '(act of) spattering'
seilmide 'snail, slug'	*	seilmideáil '(act of) dawdling, going at a snail's pace'
guairne 'whirl, spin'	*	guairneáil '(act of) whirling, spinning'
scaits 'whopping lie'	*	scaitseáil '(act of) telling lies'

pilibire 'tiny, unimportant person or thing'	*	pilibireáil '(act of) toying, trifling'
geáitse 'affected manner, pose'	*	geáitseáil '(act of) posing, gesturing'
rúspa 'poke, blow'	*	rúspáil '(act of) poking, rummaging'
ladhar 'space between toes or fingers, claw'	*	ladhráil '(act of) clawing, clutching, fumbling'
glamhaisc 'anything that makes an ugly, cackling noise (D)'	*	gleamhscáil '(act of) crunching, chewing noisily'

(43b)

N	V	Abstract Noun in -áil
*	*	strucáil '(act of) trucking, bargaining'
*	*	drundáil '(act of) crab-sidling'
*	*	gloinceáil '(act of) rocking, unsteady gait'
*	*	sleaingeáil '(act of) lurching, staggering'
*	*	cipleáil '(act of) toying, trifling with'
*	*	súpláil '(act of) sucking at the breasts'
*	*	cadráil '(act of) chattering, chatter'
*	*	tiargáil '(act of) preparing, preparatory work'

The third group contains forms which seem to be modelled on English verbs. In some cases, we have corresponding nouns borrowed into Irish as well.

(43c)

N	V	Abstract Noun in -áil
*	*	sulcáil '(act of) sulking'
*	*	scriobláil '(act of) scribbling, scribble'
*	*	trádáil '(act of) trading, trade'
*	*	meandáil '(act of) mending, pottering'
*	*	tindeáil '(act of) tending, care'
*	*	geaimleáil '(act of) gambling'
*	*	raimleáil '(act of) rambling, pub-crawling'
*	*	pípeáil '(act of) peeping'
*	*	praeitseáil '(act of) preaching'
*	*	póitseáil '(act of) poaching'
*	*	lófáil '(act of) loafing'
*	*	rampáil '(act of) romping'

cleatar 'clatter'	*	cleatráil '(act of) clattering'
flapa 'flap'	*	flapáil '(act of) flapping'
stéibh 'stave'	*	stéibheáil '(act of) staving, bashing'
ríl '(of dance) reel'	*	ríleáil '(act of) reeling'
raisín 'ration'	*	raisneáil '(act of) rationing'
steip 'step'	*	steipeáil '(act of) stepping, step-dancing'

Thus, ÓD contains about 100 nominalisations with a uniform semantics '(act of) V-ing', apparently lacking a corresponding verbal base. In the following section we demonstrate that these abstract nouns do have a verbal source.

4.3.3.5. Forms in -áil in ÓD which are not listed as VNs

An important problem which we have to address at this point is whether there exist any differences between the forms in (41), which discharge the function of participles, and the forms listed in (43 a b c). In our view the distinction is spurious. Apart from their formal similarity, we can discern a striking semantic resemblance. Abstract nouns which function as VNs form groups which are semantically related and so do the forms in (43):

(44)

SEMANTIC CONCEPT	ABSTRACT NOUNS + PARTICIPLE (41)	ABSTRACT NOUNS (43)
WORK	*crácáil* 'hardship', *giurnáil* 'light work', *rábáil* 'fast, unmethodological work'	*slabáil* '(act of) puddling, sloppy work', *foraiseáil* '(act of) hurrying with work', *slibreáil* 'slipshod work, (act of) pottering'
NOISE	*gleotháil* 'noisiness'	*fothramáil* '(act of) making noise'
MESSING	*slaimiceáil* 'messing', *méiseáil* 'messing'	*spoitseáil* '(act of) botching messing'
STRIKING	*fadhbáil* 'striking', *spreotáil* 'hacking', *tiortáil* 'knocking about, rough treatment', *cáibleáil* 'knocking about', *traiseáil* 'thrashing, beating'	*leidhceáil* '(act of) beating', *smúcháil* '(act of) beating'

GROPING FUMBLING	*paidhceáil* 'poking', *méarnáil* 'groping', *gliúmáil* 'fumbling, groping', *prócáil* 'probing, poking, *mútáil* 'fumbling, pottering', *útamáil* 'fumbling, groping, bungling, pottering'	*póirseáil* '(act of) groping rummaging, searching,'
STRUGGLE	*iomrascáil* 'wrestling', *trasnáil* 'contradicting, interrupting, crossing', *cargáil* 'jostling, wrestling, rough treatment', *strácáil* 'striving, struggling', *ciapáil* 'strife, contention, annoyance'	*rúcáil* 'commoting, wrangling'
TALKING	*rífáil* 'fussing, silly talk' , *margáil* 'bargaining, haggling', *praghsáil* 'pricing, bidding'	*scaitseáil* '(act of) telling lies', *strucáil* '(act of) trucking, bargaining', *cadráil* '(act of) chattering, chatter', *sifleáil* 'silly talk'
MOVING QUICKLY OR SLOWLY	*séirseáil* 'hurrying', *réachtáil* 'running', *slabhráil* 'shuffling, trudging', *dromadáil* 'walking backwards', *stampáil* 'stamping with feet, jerking spasmodically, stumping, struggling along', *peilteáil* 'pelting', *righneáil* 'lingering, loitering', *fáinneáil* 'circling, fluttering about', *máinneáil* 'rolling gait, loitering', *siobáil* 'pottering', *múitseáil* 'mooching'	*seilmideáil* '(act of) dawdling, going at a snail's pace', *sleaingeáil* '(act of) lurching, staggering', *raimleáil* '(act of) rambling, pub-crawling', *fadáil* '(act of) delaying, lingering', *gúngáil* '(act of) swaying, staggering, awkward walk'

How do we account for the fact that only some abstract nouns seem to function as VNs, whereas others characterised by similar semantics and the same final string are not attested in this use? We will claim that all abstract nouns in *-áil* are derived from potential Vs stored in the Conditional Lexicon. There is a number of reasons for making this claim. Firstly, the semantic paraphrase '(act of) V-ing' is typical of actional nominalisations. Secondly, the idiosyncratic semantic relationships existing between simple nouns and nominalisations in *-áil* are characteristic of N → V derivation and not N → N derivation. Recall rule (37) which generates Vs from Ns. It is only natural to assume that a similar rule

produces Vs which are the bases of the nominalisations above. Thirdly, and most importantly, we can prove the existence of these potential verbs because they serve as bases for another derivational process, namely the derivation of Nomina Agentis. Before demonstrating this, we make a brief excursus into Polish morphology.

Malicka-Kleparska (1985: 52) takes Allen's idea (1978) of the Conditional Lexicon and develops it. She argues that 'WFRs are <u>not ordered</u>, specify as few features as possible, and can accept <u>potential forms </u>as bases.' To illustrate her point she considers the rule deriving abstract nouns signifying trends and terminating in *-izm* from proper names, e.g. *Freud – freudyzm* 'Freud's theory' or *Chomeini – ?chomeinizm* '?Chomeini's theory'. The rule can be sketched as follows:

$$N_{[+ \text{ proper },+ \text{ foreign}]} \quad \rightarrow \quad N_{[+ \text{ foreign},+ \text{ abstract}]}$$
$$+ \text{ izm}$$

There is another rule in Polish which turns all foreign nouns into personal ones by means of the suffix *-ist(a)*: *traktor* 'tractor' – *traktorzysta* 'tractor driver', *freudyzm – freudysta* 'an adherent of Freud's theory'. This rule can be simplified as follows:

$$N_{[+ \text{ foreign}]} \quad \rightarrow \quad N_{[+ \text{ foreign},+ \text{ personal}]}$$
$$+ \text{ ist(a)}$$

As a result, ?*chomeinista* also arises as ?*chomeinizm* has the feature complex required in order for it to be subject to this rule.
Another rule turns *-ist(a)* words based on *-izm* into relational adjectives:

$$[[X + izm] + ist(a)] \quad \rightarrow \quad [[Y]iczn(y)]_{[\text{Adj. rel.}]}$$

Therefore, **traktorzystyczny* will not arise, although the rule will produce *freudystyczny*. If we recognise the existence of the Conditional Lexicon we are able to predict that ?*chomeinistyczny* is possible since *chomeinista* is a potential word. All the information contributed by the consecutive rules accumulates in the entry and makes it possible for the form to undergo further stages of derivation.

To prove that abstract nouns in *-áil* have verbal sources, we need to find a WFR which operates on VN bases and admits both potential and attested VNs.

Doyle (1992: 71-87) argues that verbal nouns provide the input for the rules producing agentive nouns or Nomina Agentis.[42] Consider agentive nouns in *-í* :

(45a)	**Verb (citation form)**	**Nomen Agentis**
	bácáil 'bake'	bácálaí 'baker'
	[bɑːkɑːlʹ]	[bɑːkɑːliː]
	admhaigh 'confess'	admhálaí 'confessor'
	[ɑdvəgʹ]	[ɑdvɑːliː]
	caill 'lose'	cailliúnaí 'loser'
	[kalʹ]	[kalʹuːniː]
	troid 'fight'	trodaí 'fighter'
	[trodʹ]	[trodiː]

Nomina Agentis are formed by adding *-í* to the genitive case[43] of the VN, which is formed by depalatalisation of the final consonant and adding the suffix *-a*.

(45b)	**Verb (citation form)**	**Verbal Noun**	**VN-gen.**	**Nomen Agentis**
	bácáil 'bake'	bácáil	bácála	bácálaí
	[bɑːkɑːlʹ]	[bɑːkɑːlʹ]	[bɑːkɑːlə]	[bɑːkɑːliː]
	admhaigh 'confess'	admháil	admhála	admhálaí
	[ɑdvəgʹ]	[ɑdvɑːlʹ]	[ɑdvɑːlə]	[ɑdvɑːliː]
	caill 'lose'	cailliúint	cailliúna	cailliúnaí
	[kalʹ]	[kalʹuːnʹtʹ]	[kalʹuːnə]	[kalʹuːniː]
	troid 'fight'	troid	troda	trodaí
	[trodʹ]	[trodʹ]	[trodə]	[trodiː]

If the forms in (43 a b c) are indeed derived from potential Vs, potential VNs should be capable of functioning as bases for the derivation of agentive nouns. More than 60 Nomina Agentis in ÓD can be related to the abstract nouns in question or to be more precise, to the potential VNs from which these abstract nouns are derived. If we can prove the existence of a non-finite form, this points to the existence of a corresponding potential verbal root. Here is a list of the agentive nouns in question together with their corresponding potential VNs.

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[42] In a similar vein, Cetnarowska (1999) argues that Polish present participles may be converted into Agents, e.g.
przewodniczący 'presiding over (sth), imperfective' → *przewodniczący* 'chairperson'
służący 'serving, imperfective' → *służący* 'servant'
[43] The genitive case of the VN is, in fact, a positional variant of the active participle, which is used to postmodify a noun. This interpretation has been argued for in section 2.3. in chapter 2.

(46)

VN	Nomen Agentis
slabáil 'puddling, sloppy work'	slabálaí 'sloppy worker'
scriobláil 'scribbling'	scrioblálaí 'scribbler'
peallacáil 'gathering'	peallacálaí 'gatherer'
tuarascáil 'account, description'	tuarascálaí 'reporter'
strucáil 'bargaining, soliciting'	strucálaí 'negotiator, bargainer'
trádáil 'trading'	trádálaí
buaiceáil 'showing off'	buaiceálaí 'swagger'
gloinceáil 'rocking, swaying'	gloinceálaí 'person of unsteady gait'
bóisceáil 'boasting'	bóisceálaí 'boaster'
scuaideáil 'spattering'	scuaideálaí 'spatterer, sloppy person'
sceideáil 'trifling, wiggling'	sceideálaí 'trifler, wiggler'
seilmideáil 'dawdling'	seilmideálaí 'dawdler'
slibreáil 'pottering, slipshod work'	slibreálaí 'slipshodworker, potterer'
geaimleáil 'gambling'	geaimleálaí 'gambler'
raimleáil 'rambling'	raimleálaí 'rambler'
cuimleáil 'tossing about, rough handling'	cuimleálaí 'slovenly person'
toicneáil 'thickening (cloth), fulling'	toicneálaí 'fuller'
gáinneáil 'dealing, huckstering'	gáinneálaí 'dealer, huckster'
foirneáil 'rolling, gadding about, idling'	foirneálaí 'gadabout, idler'
póitreáil 'gormandizing'	póitreálaí 'gormandizer'
cnáimhseáil 'grumbling'	cnáimhseálaí 'grumbler'
póirseáil 'rummaging, searching'	póirseálaí 'rummager, searcher'
scaitseáil 'telling lies'	scaitseálaí 'liar'
geáitseáil 'posing, gesturing'	geáitseálaí 'poser, gesticulator'
praeitseáil 'preaching'	praeitseálaí 'preacher, preachy person'
spoitseáil 'botching, messing'	spoitseálaí 'botch, messer'
póitseáil 'poaching'	póitseálaí 'poacher'
meiliteáil 'garbling, gabbling'	meiliteálaí 'garbler, mumbler'
puiteáil 'puddling, messing'	puiteálaí 'puddler, messer'
lófáil 'loafing'	lófálaí 'loafer'
géagáil '(in wrestling) clinching, holding arms'	géagálaí 'clincher, mauler'
cadráil 'chattering'	cadrálaí 'chatterbox'
tiargáil 'preparing'	tiargálaí 'preparatory worker, pioneer'

cearbháil 'carping, grumbling'	cearbhálaí 'carper, grumbler'
smearacháil 'smearing, messy work'	smearachálaí 'smearer, greaser, messy worker'
procháil 'burrowing'	prochálaí 'burrower, clumsy digger'
abláil 'botching'	ablálaí 'botcher'
méadláil 'gormandizing'	méadlálaí 'gormandizer'
ráfáil 'gossiping, chattering'	ráfálaí 'chatterer, gossip'
srúmáil 'dabbling, splashing'	srúmálaí 'dabbler, splasher'
slópáil 'cheating, absconding'	slópálaí 'sloper, decamper'
rúpáil 'fast unmethodological work, working fast,'	rúpálaí 'strong unmethodological worker'
tiaráil 'toiling, slogging'	tiarálaí 'toiler, slogger'
cosaráil 'trampling'	cosarálaí 'trampler, clumsy-footed person'
cleatráil 'clattering'	cleatrálaí 'clatterer'
sciotaráil 'tittering, giggling'	sciotarálaí 'titterer, giggler, silly talker'
cadráil 'chattering'	cadrálaí 'chatterbox'
meadráil 'churning, messing about'	meadrálaí 'churner, messer'
fuadráil 'bustling, fussing'	fuadrálaí 'fussy person'
luadráil 'gossiping'	luadrálaí 'gossip'
líodráil 'hanging about, sponging'	líodrálaí 'hanger-on, sponger'
síodráil 'prating, jabbering'	síodrálaí 'prater'
ceáfráil 'cutting capers, frisking'	ceáfrálaí 'caperer'
tóchráil 'rooting, grubbing'	tóchrálaí 'rooter, grubber, inexpert digger'
potráil 'pottering'	potrálaí 'potterer'
gliocsáil 'pottering, dabbing'	gliocsálaí 'clumsy worker'
plucsáil 'talking indistinctly, indistinct talk'	plucsálaí 'indistinct talker'
gíotáil 'pottering, trifling'	gíotálaí 'potterer, fumbler'
sceanartáil 'cutting, hacking, mangling'	sceanartálaí 'hacker, mangler'

Thus, in the list above, the existence of the Agent noun *slabálaí* presupposes the existence of a VN *slabáil*, which in turn implies that there is a potential verbal root ?**slabál-**.

We suggest that we recognise the existence of a verb whenever we encounter a form ending in -*áil* in ÓD glossed as '(act of) V-ing'. It is a matter of arbitrary choice of dictionary authors that certain forms are listed as nouns and others as

verbs. For example, some abstract nouns which we put into the category which lacks verbal sources actually have corresponding VNs and even finite verbs according to Dinneen (1927):

(47)

Dinneen (1927):	**Ó Dónaill (1977):**
slabáil, *-ála*, 'working in a careless manner', ***ag slabáil agus ag slobáil***	*slabáil*, *-ála*, '(act of) puddling, sloppy work'
tiargáil, *-ála*, 'preparing; preparation, preliminaries', ***ag tiargáil chum iascaigh***, 'getting ready to go fishing'	*tiargáil*, *-ála*, '(act of) preparing, preparatory work'
peallacáil, *-ála*, 'act of engrossing, storing up secretly', ***ag peallacáil ar fuaid an tighe***, 'bagging things about the house'	*peallacáil*, *-ála*, '(act of) bagging, gathering, hoarding'
slibireálaim, *-eáil*, v. intr. 'I hang around, do odd jobs, apart from regular work'	*slibireáil*, *-ála*, 'slipshod work, (act of) pottering'

Here are some more examples from Dinneen and other sources[44] in which forms in *-áil* from (43) appear as active participles or in finite usage:

> (43a)   ag slabáil, ag balcáil – balcálann (= bulcáil), ag scaitseáil, ag geáitseáil, ag ladhráil, ag róspáil (? = rúspáil)
>
> (43b)   ag cadráil, ag tiargáil, ag glancáil (? = gloinceáil), ag gleamhscáil, ag súpláil
>
> (43c)   ag trádáil, ag tindeáil

It is also worth noting that Ó Cuív (1980: 129) gives numerous examples of *-áil* VNs not found in ÓD.

Listing abstract nouns in *-áil* and leaving out the corresponding verbal entry is simply a lexicographic oversight. The verbal or VN usage seems to be more prototypical. That is why (48a) sounds a much more likely sentence than (48b).

(48)

a. *Tá sé ag scaitseáil.*
    is he PRT lie-VN
    'He is lying.'

b. *Is uafásach an rud é an scaitseáil.*
    is terrible the thing it the lie-VN
    'Lying is a terrible thing.'

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[44] They include the following word lists: Ó Cuív (1947), Breatnach (1984), de Bhaldraithe (1985b) and Ó hAirt (1988).

In sum: nominalisations in *-áil* with the semantics '(act of) V-ing ' are deverbal. For each form there exists an actual or potential verb. In some cases the verb in question is denominal, in others it is borrowed from English. Another conclusion we can draw is that verbs in *-áil* are attested predominantly in their VN usage (this was attributed to their semantics and possible connection with English *-ing* forms). Interestingly, corresponding nominalisations are for the most part uncountable and exhibit the regular semantics '(act of) V-ing'.

5. II Conjugation

5.1. *-t [t´]*

5.1.1. *Rule-governed affix attachment*
There is a large group of second conjugation verbs that form their corresponding verbal nouns by means of the suffix [t´] which is added to the root. The final consonant of the disyllabic root is a coronal sonorant or palatalised velar nasal preceded by a short unstressed vowel: [əl´, əl, ər´, ər, ən´, ən, əŋ´]. When the root final consonant is palatalised the verbal root will be the same as the citation form, i.e. 2nd pers. sg. imperative form – as in the first three examples in (49a). The examples in (49b) demonstrate that in the case of verbs whose root final consonant is velarised the citation form is irrelevant. In order to extract the root we take the present indicative form and cut off tense inflection and the thematic vowel. The addition of the palatalised consonant to form the VN will not affect the quality of [r] (it is a phonotactic constraint of Irish that [r´] is never palatalised in the [rt´] cluster), but will result in the palatalisation of [l].

(49a)

2nd sg. imperative (Citation form)	Indicative present with the root underlined	VN
aifir [af´ər´] 'rebuke'	aifríonn [<u>af´ər´</u>iːn´]	aifirt [af´ərt´]
eitil [et´əl´] 'fly'	eitlíonn [<u>et´ə l´</u>iːn´]	eitilt [et´əl´t´]
fulaing [fuləŋ´] 'endure'	fulaingíonn [<u>fuləŋ´</u>iːn´]	fulaingt [fulən´t´]

(49b)

2nd sg. imperative (Citation form)	Indicative present with the root underlined	VN
freagair [f´r´agə**r**´] 'answer'	freagraíonn [<u>f´r´agə**r**</u>iːn´]	freagairt [f´r´agərt´]
mungail [muŋgəl´] 'munch'	munglaíonn [<u>muŋgəl</u>iːn´]	mungailt [muŋgəl´t´]

The table in (50a) displays forms with palatalised root-final consonants.

(50a) **Verbal root =**
Citation form | **VN**
aifir [afʹərʹ] 'rebuke' | aifirt [afʹərtʹ]
aithin [ahənʹ] 'know' | aithint [ahənʹtʹ]
cigil [kʹigʹəlʹ] 'tickle' | cigilt [kʹigʹəlʹtʹ]
coigil [kogʹəlʹ] 'spare' | coigilt [kogʹəlʹtʹ]
cuimil [kimʹəlʹ] 'rub' | cuimilt [kimʹəlʹtʹ]
díbir [dʹiːbʹərʹ] 'banish' | díbirt [dʹiːbʹərtʹ]
eitil [etʹəlʹ] 'fly' | eitilt [etʹəlʹtʹ]
fulaing [fuləŋʹ] 'endure' | fulaingt [fulənʹtʹ]
tarraing [tɑrəŋʹ] 'pull' | tarraingt [tɑrənʹtʹ]
tuargain [tuərgənʹ] 'pound' | tuargaint [tuərgənʹtʹ]
tuirling [tuːrlʹəŋʹ] 'discend' | tuirlingt [tuːrlʹənʹtʹ]

The table below contains verbal roots with a velarised consonant and their corresponding VNs.

(50b) **Verbal root** | **VN**
ag(a)r- [ɑgər] 'plead' | agairt [ɑgərtʹ]
bag(a)r- [bɑgər] 'brandish' | bagairt [bɑgərtʹ]
cogn- [kogən] 'chew' | cogaint [kogənʹtʹ]
cosn- [kosən] 'defend' | cosaint [kosənʹtʹ]
coscr- [koskər] 'cut up' | coscairt [koskərtʹ]
eascr- [askər] 'sprout' | eascairt [askərtʹ]
fógr- [foːgər] 'proclaim' | fógairt [foːgərtʹ]
freagr- [fʹrʹagər] 'answer' | freagairt [fʹrʹagərtʹ]
fuascl- [fuəskəl] 'release' | fuascailt [fuəskəlʹtʹ]
iob(a)r- [iːbər] 'sacrifice' | iobairt [iːbərtʹ]
mung(a)l- [muŋgəl] 'munch' | mungailt [muŋgəlʹtʹ]
múscl- [muːskəl] 'wake' | múscailt [muːskəlʹtʹ]
oscl- [oskəl] 'open' | oscailt [oskəlʹtʹ]
satl- [sɑtəl] 'tread' | satailt [sɑtəlʹtʹ]
seachn- [ʃaχən] 'avoid' | seachaint [ʃaχənʹtʹ]
tochl- [toχəl] 'dig' | tochailt [toχəlʹtʹ]
treascr- [tʹrʹaskər] 'knock down' | treascairt [tʹrʹaskərtʹ]

Our observations up to this point can be formalised as another affixation rule spelling out the morphomic function F_{VN}:

(51a)

$\exists Z : Z = [[X] + t']$ if $[X]_{[V, \text{Class 2, disyllabic}]} = [Y \text{ əl'}, \text{ əl}, \text{ ər'}, \text{ ər}, \text{ ən'}, \text{ ən}, \text{ əŋ'}]$

Due to the fact that there are no disyllabic first conjugation verbs ending in sonorants preceded by an unstressed vowel, the information about the verb class in the rule becomes redundant. Another modification to our rule we could introduce is to subsume the relevant consonants under one label. We could put forward a negative condition on the affix attachment. Namely, *-t* will be appended to those verbal roots which end in a sonorant which is not labial.[45] It seems that an even more general specification of the final consonant as [+ sonorant] will account for the existing forms. Virtually, there are no items ending in the *-mt* cluster. Gussmann and Doyle (1996) list only two – *léimt* and *foghlaimt*, which are variants of *léim* and *foghlaim*. Ó Sé (2000: 34-35) does not regard the sequence as a possible coda cluster. Thus, our rule should read as follows:

(51b)

$\exists Z : Z = [[X] + t']$ if $[X]_{[V, \text{disyllabic}]} = [Y \text{ əC}_{[+ \text{sonorant}]}]$

5.1.2. Lexically marked items
The suffix in question is also attached to first conjugation verbs. It attaches to disyllabic roots which end in *-án* [ɑːn] [46], e.g.

(52)   **Verbal root**   **VN**
       iomán- [imɑːn] 'hurl'   iomáint [imɑːn't]
       taispeán- [taspɑːn] 'show'   taispeáint [taspɑːn't']
       tiomán- [t'imɑːn] 'drive'   tiomáint [t'imɑːn't']

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[45] Interestingly, there are some grounds for assuming this negative rule specification, as the bilabial sonorant which is not included in rule (51a) seems to be the odd one out in the class of sonorants. In her analysis of nasal lenition phenomena in Connemara Irish, Bloch-Rozmej (1998: 239-269) concludes that '[m] should be treated as standing on the verge between the classes of sonorants and obstruents in being defined both by **h** (noise) and **ʔ** (occlusion)'. The behaviour of [m] with respect to morphologically conditioned consonant lenition matches that of the plosive obstruent [b]. They are both lenited to fricatives [w]/[v']. The word-initial coronal nasal does not undergo lenition. To prove that the bilabial nasal stands out from the class of nasal segments (because of its close relationship with [v/w]) she also mentions certain defricatisation processes, sandhi phenomena and facts connected with vowel nasalisation.
[46] The palatalisation of *-n* could be regarded as assimilation.

We could postulate the following rule of affixation:

∃ Z : Z = [[X] + tʹ] if [X] $_{[V, disyllabic]}$ = [Y ɑːn]

if it were not for the fact that there is fewer than a handful of forms which would undergo it. We will, therefore, opt for lexical marking.

In addition to this, there is a group of monosyllabic verbs ending in a palatalised alveolar sonorant which instead of taking the expected 1st conjugation *-(e)adh* [ə] suffix, take *-t* [tʹ]. In this case we have to resort to lexical marking as well.

(53)   **Verbal root**   **VN**
        adhn- [ɑːn] 'kindle a fire'   adhaint [ɑːnʹtʹ]   (D: adhnadh)
        bain [binʹ] 'dig out'   baint [binʹtʹ]
        ceil [kʹelʹ] 'conceal'   ceilt [kʹelʹtʹ]
        deighil [dʹailʹ] 'separate'   deighilt [dʹailʹtʹ]
        labhr- [laur] 'speak'   labhairt [laurtʹ]
        meil [mʹelʹ] 'grind'   meilt [mʹelʹtʹ]
        roinn [ronʹ] 'divide'   roinnt [ronʹtʹ]

All the forms listed above are genuine exceptions as there are monosyllabic verbs ending in the same sound sequences and forming the corresponding VN by means of the expected regular *-(e)adh* [ə] formative. *ceil* 'hide'– *ceilt* and *meil* 'grind'– *meilt* can be contrasted with the verb *deil* 'turn, make on lathe', which has a regularly formed VN namely: *deileadh*. Similarly, *roinn* 'divide' – *roinnt* is an exception, cf. *sloinn* 'declare, name' – *sloinneadh*. These minimal pairs of forms in synchronic terms do not differ in any significant way phonologically or morphologically, and still require the attachment of different suffixes. The same holds for *deighil* 'separate'– *deighilt*. There is a monosyllabic verb *cadhail* [kailʹ] 'coil, twist' whose VN is formed by means of *-(e)adh caidhleadh*. So there aren't any phonological restrictions which rule out the occurrence of the sequence *-aileadh* [ailʹə]. As for *adhain* 'kindle a fire' – *adhaint*, Dinneen provides as an alternative the expected regular variant, i.e. *adhnadh*, and there are regular verbs such as *cáin* 'fine' – *cáineadh*. *-(e)adh* also attaches regularly to monosyllabic forms in [inʹ], e.g. *scinn* 'start' – *scinneadh*, *fuin* 'cook' – *fuineadh*, so *baint* has to be lexically marked.

When we specify the conditions on the attachment of *-t* no reference has to be made to verb class. It is regularly attached to verbal roots ending in a sonorant if a short unstressed vowel precedes. So far, we have identified about 10 exceptions. In addition to this, we need to include cases of second conjugation

verbs which end in an unstressed coronal sonorant and yet take the *-(e)adh* suffix:[47]

(54) **V**   **VN**
      cabh(ə)r- [kaur] 'emboss'   cabhradh [kaurə]
      lead(ə)r- [lʹadər] 'smite'   leadradh [lʹadrə]   (D: leadairt)
      sciom(ə)r- [ʃkʹimər] 'dribble'   sciomradh [ʃkʹimrə]
      scob(ə)l-[skobəl] 'scutch'   scobladh [skoblə]
      stoithin [stohənʹ] 'tousle'   stoithneadh [stohnʹə]
      tog(ə)r- [togər] 'desire'   togradh [togrə]

We need to bear in mind that we are supposed to account for tendencies. Our rules unfortunately cannot be stated in absolute terms, so there will always be exceptions. Therefore, we shall stick to the affixation rule put forward in (51b) and all items in this section will be regarded as lexically marked.

5.2. Long vowel

Let us now turn to second conjugation verbs with citation forms terminating in *-igh*. They can be divided into two groups. Verbs belonging to the first have VNs ending in *-í*, whereas those in the second possess the *-(i)ú* suffix.[48]

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[47] Many verbs listed in (50) which conform to the affixation rule in (51) have variant forms in *-(e)adh*. Therefore, for example, we find *díbreadh* side by side regular *díbirt*, *adgradh* and *agairt*, *cognadh* and *cogaint*, *oscailt* and *oscladh* etc. We believe that this is dialectal variation which has something to do with different class membership assigned to the verbal roots in question. This explanation finds some support in O'Rahilly (1932: 222-223) who identifies a tendency 'for certain verbs to go over from the first conjugation (type *molaim*) to the second (type *minim < minighim*). Thus *imrim* is now generally *imrím* in Connacht and Munster though the older form, *imrim*, is still used to some extent in the latter province. So *labhraim*, *innisim*, retained in Munster are *labhraím*, *innsím* in Connacht.' As dictionaries provide no information whatsoever about such variant forms (where they are used, whether they are accompanied by changes in the conjugation of the verb) we are in no position to make valid statements and will consequently disregard them. If we wanted to account for all variants in all dialects, the task of formulating general rules would not be feasible.

[48] This division is well-established in the language. O'Rahilly (1932: 67) writes that 'verbs in *-aigh* regularly make the verbal noun in *-aghadh* (*-eaghadh*), otherwise written *-(i)ughadh*. This termination is now, and has been for at least three centuries, *-ú*.' He goes on to add (p. 69) that 'as verbal-noun termination of verbs in *-igh*, Mid. and E. Mod. Ir. had, in addition to the ordinary *-aghadh* (*-ughadh*), an alternative form *-achadh*, found mainly in the poets. This form evidently started from Mid. Ir. *bennachad*,

(55)

a. | | **V** | | **VN** |
|---|---|---|---|
| | cónaigh | 'dwell' | cónaí |
| | mallachtaigh | 'curse' | mallachtaí |

b. | fuaraigh | 'cool' | fuarú |
|---|---|---|
| maslaigh | 'insult' | maslú |

Verbs like those in (55a) should be treated as exceptions and listed in the Permanent Lexicon. We postulate a separate suffix *-í* which is attached to certain lexically marked roots. (56) lists the relevant items from ÓD.

(56)

Citation form	**VN**	**VN Variant**
achainigh [ɑχən´ig´] 'entreat'	achainí [ɑχən´i:]	
ársaigh [ɑːrsəg´] 'tell'	ársaí [ɑːrsi:]	
ceasnaigh [k´asnəg´] 'complain'	ceasnaí [k´asni:]	
cónaigh [koːnig´] 'dwell'	cónaí [koːni:]	cónú
corraigh [korig´] 'move'	corraí [kori:]	corrú
eachtraigh [ɑχtrig´] 'narrate'	eachtraí [ɑχtri:]	eachtrú
eascainigh [askən´əg´] 'curse'	eascainí [askən´i:]	
éirigh [eːrig´] 'rise'	éirí [eːri:]	éiriú
fiafraigh [f´iəfrig´] 'ask'	fiafraí [f´iəfri:]	
fionraigh [f´inrig´] 'wait'	fionraí [f´inri:]	
impigh [im´p´ig´] 'entreat'	impí [im´p´i:]	
ionsaigh [insig´] 'attack'	ionsaí [insi:]	
mallachtaigh [mɑləχtig´] 'curse'	mallachtaí [mɑləχti:]	
taithigh ['tahig´] 'frequent'	taithí [tahi:]	taithiú

Variants terminating in *-(i)ú*, e.g. *cónaí – cónú* may point to a tendency towards regularisation in the lexicon. They could be analogical formations. In Dinneen (1927) only the lexicalised variant is attested, e.g. *eachtraighim* [ɑχtri:m] 'I tell stories', *ag eachtraighe* [əg ɑχtri:] 'telling anecdotes', or *éirighim* [eːri:m] 'I rise', *ag éirighe* [əg eːri:] 'rising'. The variant forms in *-(i)ú* are attested only in the dictionary compiled 50 years later by Ó Dónaill (1977).

Verbs like those in (55b) are denominal and deadjectival. Wigger (1972: 206-207) notes that these verbs are mainly causative, factive and inchoative, and the

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mallachad, verbal nouns of *bennach*, *mallach* (cf. *mallachtaigh* 'curse' in (55a) above), verbs which later went over to the *-igh* class, while frequently retaining the old v.n. in *-achadh*.'

process of their derivation must now be regarded as unproductive. This poses the question of whether the selection of the affix is affected by the fact that the root in question is morphologically complex, or it is simply triggered by the fact that the root belongs to Verb Class 2. We cannot rule out the possibility that both specifications are necessary to evoke the required affixation operation.

The forms in (57a) are deadjectival verbs, whereas those in (57b) are denominal.

(57)

a.

Adjective	**V (Citation form)**	**VN**
fuar 'cold'	fuaraigh 'cool'	fuarú
lán 'full'	lánaigh 'fill'	lánú
ciúin 'calm'	ciúnaigh 'pacify'	ciúnú
deis 'right'	deisigh 'repair'	deisiú
borb 'fierce'	borbaigh 'get angry'	borbú
beacht 'exact'	beachtaigh 'correct'	beachtú

b.

Noun		
masla 'insult'	maslaigh 'insult'	maslú
cumas 'capability'	cumasaigh 'enable'	cumasú
tuirse 'tiredness'	tuirsigh 'tire'	tuirsiú
tairbhe 'benefit'	tairbhigh 'benefit'	tairbhiú
leac 'flat stone'	leacaigh 'flatten'	leacú
achoimre 'summary'	achoimrigh 'summarise'	achoimriú
bréag 'lie'	bréagnaigh 'contradict'	bréagnú

We should not, however, turn a blind eye to the fact that a large proportion of these morphologically complex words could be derived from either nouns or adjectives as in many cases both are available as bases, e.g.

(58)

Noun	**Adjective**	**V (Citation form)**
masla 'insult'	maslach 'insulting'	maslaigh 'insult'
tuirse 'tiredness'	tuirseach 'tired'	tuirsigh 'tire'
achoimre 'summary'	achomair 'brief'	achoimrigh 'summarise'

Prima facie evidence suggests that causative and inchoative verbs of the form Y*aigh* where Y is an independently occurring word are derived from adjectives, e.g. *ardaigh* 'make *ard* (high), heighten'. It is true that in many cases the adjective has a corresponding nominal homonym, e.g. *ard* 'high' and *ard* 'height, hillock'. The same can be observed in English for the marginally

productive suffix *-en* deriving verbs from adjectives, e.g. *red*$_N$ 'a red wine/a communist', *red*$_A$ → *redden*$_V$. It is not obvious which of the two *standard*$_A$ or *standard*$_N$ constitutes the base for the verb *standardise*$_V$. By the same token: is it *ideal*$_A$ → *idealise*$_V$ or *ideal*$_N$ → *idealise*$_V$? The problem of double (or multiple) motivation has received a lot of attention in Slavonic literature (e.g. cf. Grzegorczykowa and Puzynina 1979) and a very neat explanation of the phenomenon within the generative framework having recourse to semantic, formal, distributional and systemic arguments can be found in Malicka-Kleparska (1985).

Let us have a look at the apparently doubly motivated verbs in (59).

(59)

Noun	Adjective	V (Citation form)
ard 'height, hillock'	ard 'high'	ardaigh 'heighten'
lag 'a weak person'	lag 'weak'	lagaigh 'weaken'
úr 'anything fresh'	úr 'fresh'	úraigh 'freshen'
díreach 'straight course'	díreach 'straight'	dírigh 'straighten'
maol 'bare, bald object'	maol 'bare'	maolaigh 'make / become bald'
láidir 'strong person'	láidir 'strong'	láidrigh 'strengthen'
dlúth 'warp'	dlúth 'close'	dlúthaigh 'tighten'
dorcha 'darkness'	dorcha 'dark'	dorchaigh 'darken'
trom 'weight, burden'	trom 'heavy'	tromaigh 'make heavier'
ramhar 'thick part'	ramhar 'fat'	ramharaigh 'get fat'
géar 'sharp object'	géar 'sharp'	géaraigh 'sharpen'
glas 'green (colour)'	glas 'green'	glasaigh 'make / become green'
bán 'white'	bán 'white'	bánaigh 'whiten'
donn 'brown'	donn 'brown'	donnaigh 'make / become brown'
gorm 'blue'	gorm 'blue'	gormaigh 'make / become blue'

If we have a closer look at the meanings of the nouns in question we shall notice that it is compositional. The nouns can be paraphrased by means of the adjectives. The noun denotes 'something or somebody that is Adjective'. The last four examples show that adjectives denoting colours can be turned into verbs. Interestingly, a noun such as *oráiste* 'orange', which has no corresponding adjective, lacks a verb. The fact that some adjectives which serve as bases for the derivation of verbs, have no nominal opposite number, is another piece of evidence to support our initial assumption that it is adjectives that motivate verbs.

(60)	**Noun**	**Adjective**	**V (Citation form)**
	*	dian 'intense'	dianaigh 'make intense'
	*	cumhra 'sweet-smelling'	cumhraigh 'perfume'
	*	aibí 'ripe'	aibigh 'ripen'

Furthermore, the meaning of the resulting verb seems to be a function of the meaning of the adjective. The meaning of the verb can be paraphrased as 'make or become Adjective'. We can formulate a general rule whereby a verb is derived from an adjective:

(61) $\forall : [X]_A : [X] \rightarrow [[X]]_{[V, \text{Class 2}]}$

$\exists Z: Z = [[X] + \varnothing]$ e.g. ard-
/there is such/

The derivation of a de-adjectival verb does not involve any overt affixation operations. Its only effect is syntactic relabelling of the root and the assignment thereof to the second conjugation. This is also the case in, for example Hebrew, where derivational rules responsible for the formation of verbs do not involve any affixes and their only effect is an abstract inflectional class marker (cf. Aronoff 1994: 123-169). This phenomenon is best summarised in Aronoff (1994: 127): 'the morphological effect of lexeme formation (…) may sometimes provide a lexeme not only with phonological information directly (in the guise of an affix or template) but also with abstract morphological (morphomic) properties that themselves have no direct phonological repercussions but can be detected only in their subsequent effects on inflection. Sometimes the assignment of an abstract morphological property will be the only morphological effect of a rule of lexeme formation. Clearest and most dramatic among the abstract morphological properties that may be assigned by a rule of lexeme formation is inflectional class'.

However, the form of a limited number of verbs points clearly to the noun as the base for their derivation. Derivatives of this kind are not frequent. Their semantics is compositional but it is impossible to establish a uniform paraphrase. Some of these nouns additionally require consonant extension in the derivation of verbs.

(62)

Noun	Adjective	V (Citation form)
ainm 'name'	ainmneach 'nominative'	ainm**n**igh 'name'
céim 'step, degree'	céimneach 'stepped'	céim**n**igh 'step, graduate'
réim 'course, career'	*	réim**n**igh 'advance, progress'
bréag 'lie'	bréagnaitheach 'contradictory'	bréag**n**aigh 'contradict'
críoch 'boundary'	críochnaitheach 'final'	críoch**n**aigh 'finish'
laghad 'fewness'	laghdaitheach 'lessening'	laghdaigh 'diminish'
taise 'dampness'	tais 'damp'	tais**r**igh 'damp, moisten'
grian 'sun'	grianach 'sunny, cheerful'	grian**r**aigh 'insolate, sun'
gaoth 'wind'	gaothach 'windy'	gaoth**r**aigh 'fan, flutter in breeze'
béal 'mouth'	béalach 'loquacious, loose-tongued'	béal**r**aigh 'gossip'
toit 'smoke'	toiteach 'smoky'	toit**r**igh 'smoke, fumigate'
lámh 'hand'	*	láimh**s**igh 'handle, manipulate'

One might ask whether the Vs are derived from the adjectives in the second column, which in some cases are de-nominal, rather than from the Ns. In *céimnigh* 'step, graduate', *bréagnaigh* 'contradict', *críochnaigh* 'finish' we find the same -*n*- between the base and the suffix. However, adjectives probably do not form the bases for the derivation of the verbs in question, as some of them are themselves derived from the genitive singular forms of VNs, i.e.

críochnaigh →	*críochnú* →	*críochnaithe* →	*críochnaitheach*
'finish'	'VN'	'VN-gen.sg.'	'final, finishing'

For this reason, we prefer to derive these verbs directly from the Ns. Apart from the distributional and formal evidence in favour of this interpretation, we can also adduce semantic evidence. *taisrigh* 'damp' paraphrases easily as 'make *tais* (damp)' but *gaothaigh* 'fan' seems semantically unrelated to *gaothach* 'windy'. Because the denominal formations display irregular semantics and are limited in number, we assume that they are not derived by the productive WFR component and are entered in the lexicon as fully specified items whose structure involves an internal word boundary, i.e. $[[X]_N]_{[V, Class 2]}$.

In sum: the verbs which belong to the group in (55b) have the following complex structure $[[X]_{N/A}]_{[V, Class 2]}$. These verbs form their corresponding VNs by the addition [uː]:

(63) $\exists\, Z : Z = [[X] + ú]$ if $[X]_{[V, \text{Class 2}]} = [X]_{N/A}$ e.g. ainmniú, ardú

The element *-(a)igh* [iɡ´] which marks the inflectional class to which a newly formed verb belongs is not present during the VN affixation rule. Affixation rules which mark the morphomic function F_{VN} operate on verbal roots (cf. our discussion of verbal roots in 2.3.). In inflecting languages (Irish counting among them) it may be difficult to come by free standing roots. *-(a)igh* is the marker of 2nd sg. imper. of verbs which belong to the second conjugation. So, if our rule operates on verb lexemes they will occur in specific syntactic environments accompanied by relevant syntactic markers. When we need a base for an inflectional or derivational operation we will take, as proposed by Scalise (1986: 115), an uninflected word (lexeme), because every word that occurs in a sentence is inflected even if it is a matter of zero inflection.

The above rule runs afoul of the Adjacency Condition (cf. Siegel 1979 and Allen 1978). The VN is based on a form which in turn is based on another form (a three step derivation). The condition in question precludes any information concerning the derivational history of the base from being utilised in formulating WFRs. However, some authors do not accept this condition: see Kiparsky (1982: 140-141), Scalise (1986: 167-181) and Malicka-Kleparska (1985). Therefore, we will claim that it does not have to apply, as in the case of our data.

We cannot fail to notice that not all verbs which employ the suffix [uː] are derived verbs with an internal word boundary. This confirms our assumption that *-(a)igh* is a prop element used to mark the class of the verb and not a verbalising suffix like *-ál* which forms an integral part of the root.

(64)   **V (Citation form)**   **VN**
      bailigh 'gather'   bailiú
      gortaigh 'injure'   gortú
      athraigh 'change'   athrú
      brostaigh 'hasten'   brostú
      iompaigh 'turn'   iompú
      diurnaigh 'drain'   diurnú
      consaigh 'notice'   consú
      siortaigh 'rummage'   siortú

Of the 657 second conjugation verbs listed in Doyle and Gussmann (1996) about 81 are not morphologically complex. These verbs constitute about 12.5%. Our affixation rule would be far more accurate if it simply made reference to the verb class. Suffice it to say that any verb which belongs to Verb Class 2 (except

for the lexically marked items, e.g. *cónaí, ceannach* etc.), will form a VN by means of *-ú* added to the root. There is a piece of evidence in favour of regarding verb class marking as crucial. Not only second conjugation verbs can be morphologically complex. Consider:

dearg$_A$ 'red'   dearg$_V$ – deargadh 'redden/VN'   deargaigh$_V$ – deargú 'redden/VN'

where *dearg* and *deargaigh* are variants.[49] There is quite a lot of such forms. Whenever a new verb is formed from either an adjective or a noun it is assigned to a given lexical class and this arbitrary setting determines further affixation.

(65a)

Base	Verb Class 1	Verb Class 2	Gloss
deasc 'sediment'	deasc	deascaigh	'settle, leave sediment'
sciúch 'throat'	sciúch	sciúchaigh	'throttle'
maidhm 'break,burst'	maidhm	maidhmigh	'break, burst, errupt'
roc 'wrinkle, ruck'	roc	roicnigh	'wrinkle, crease'
sraoill 'ragged person' sraoilleach 'ragged'	sraoill	sraoilligh	'flog, tear apart'
dáil 'apportionment'	dáil	dáiligh	'portion out'
cis 'restraint, handicap'	cis	cisigh	'restrain, handicap'
geal 'white, bright'	geal	gealaigh	'whiten, brighten'
gréisc 'grease'	gréisc	gréiscigh	'grease'
pian 'pain'	pian	pianaigh	'pain, punish'
fionn 'white '	fionn	fionnaigh	'make white'
críon 'old, withered'	críon	críonaigh	'age, wither'
borr 'puffed, proud'	borr	borraigh	'swell, grow'
stiúir 'rudder, direction'	stiúir	stiúraigh	'steer, guide, direct'

There is some scope for variation within non-derived verbs as well. For some speakers (or dialects) a given lexeme may be Class 1, for others Class 2, e.g. *creim – creimigh* 'gnaw', *coip – coipigh* 'ferment', *ciap – ciapaigh* 'vex, annoy', *siúil – siúlaigh* 'walk'.

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[49] The same string of phonemes, i.e. *dearg* may be fed into the MS-Component having either of the two structures: $[[X]_A]_{[V, Class\ 1]}$, $[[X]_A]_{[V, Class\ 2]}$. There are no free-standing roots of verbs belonging to the second conjugation except those terminating in a palatalised coronal or nasal sonorant (e.g. *aifir* 'rebuke'). That is why whenever we wish to refer to the verbal lexeme *dearg*- with the structure $[[X]_A]_{[V, Class\ 2]}$, we use its word-form *deargaigh*.

A parallel case may be observed in Polish where one adjective serves as the base for the derivation of two classes of verbs. Like in Irish the distinction between the two classes is purely morphological and is a matter of free variation, e.g. an adjective *biały* 'white' gives rise to two verbs belonging to distinct classes – *bieleć* and *bielić się* 'be white':

(65b)

Class 1	bieleć	'be white'
	Śnieg bieleje na dachach.	'There is white snow on the roofs.'
Class 2	bielić się	'be white'
	Śnieg bieli się na dachach.	'There is white snow on the roofs.'

Originally, all disyllabic verbs in *-(a)igh* were derived, the so-called secondary verbs of Old Irish. Synchronically, the division into derived and non-derived has little relevance for affixation to verbal roots.

Instead of the rule in (63) we can put forward another fairly general affixation operation:

(66) $\exists\, Z : Z = [[X] + ú]$ if $[X]_{[V,\, Class\, 2]}$

Affixation is governed by the 'Paninian principle', which means that the most specific rules are ordered first. An elsewhere or default rule is the most general of all and is applied last. It will be preceded by the afffixation rule attaching *-t*, which contains a detailed specification of bases on which it operates, namely those which are disyllabic (belong to Class 2 by default) and terminate in an unstressed sonorant.

Of course, we need to bear in mind that for all our efforts at creating a system of affixation rules accounting for the complex data, there will always be anomalous forms reluctant to fit into our neat strait-jacket. For example, *deachair* 'differentiate' and *locair* 'plane' qualify for the *-t* ending and yet **deachairt* and **locairt* are not attested. Instead we find forms terminating in *-ú* – *deachrú, locrú*. Other anomalous second conjugation verbs include: *tathantaigh* 'urge'– *tathant, *tathantú* and *damhsaigh* 'dance' – *damhsa, *damhsú*.

5.3. -Vcht [əχt]

5.3.1. -(e)acht [əχt] and -íocht [iːχt]

There is a sizable group of VNs terminating in *-eacht*, and a handful of verbal nouns which are formed from 2nd conjugation verbs by the addition of the suffix *-íocht* to the root. In what follows we shall argue that we are dealing here with one exponent, namely *-(e)acht* [əχt].

(67)

a. **V**   **VN**

éist [eːʃtʹ] 'hear'   éisteacht [eːʃtʹəχt]
fan [fɑn] 'wait'   fanacht [fɑnəχt]
gluais [gluəʃ] 'move'   gluaiseacht [gluəʃəχt]
ceis [kʹeʃ] 'complain, grumble'   ceasacht [kʹasəχt]
dúisigh [duːʃəgʹ] 'wake'   dúiseacht [duːʃəχt]
fortaigh [fortəgʹ] 'help'   fortacht [fortəχt]
imigh [imʹəgʹ] 'go'   imeacht [imʹəχt]

b. **aoir**igh [iːrʹəgʹ] 'herd'   aoireacht [iːrʹəχt]
tairngir [tarəŋʹgʹərʹ] 'fortell, phophesy'   tairngreacht [tarəŋʹgʹərʹəχt]
cinnir [kʹinʹərʹ] 'lead by the head'   cinnireacht [kʹinʹərʹəχt]
máistrigh [mɑːʃtʹrʹəgʹ] 'master'   máistreacht [mɑːʃtʹrʹəχt]
giollaigh [gʹiləgʹ] 'lead, guide'   giollacht [gʹiləχt]
coisigh [koʃəgʹ] 'walk, travel on foot' coisíocht [koʃiːχt]
rámhaigh [rɑːvəgʹ] 'row'   rámhaíocht [rɑːviːχt]
tóraigh [toːrəgʹ] 'pursue'   tóraíocht [toːriːχt]
rothaigh [rohəgʹ] 'cycle'   rothaíocht [rohiːχt]
marcaigh [mɑrkəgʹ] 'ride'   marcaíocht [mɑrkiːχt]
ráthaigh [rɑːhəgʹ] '(of fish) shoal'   ráthaíocht [rɑːhiːχt]

At first blush, the verbs in (67) do not seem to be characterised by any feature that would be responsible for the selection of the suffix in question.[50] In addition to this, the first three items in (67a) belong to the first conjugation. Unless we find some rule underlying the selection of this particular affix, we will be forced to say that these verbs are all lexically marked for taking *-(e)acht* / *-íocht*[51] to form non-finite verb forms and nominalisations. However, the data under

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[50] In the course of our discussion it will become evident why we divide the forms in (67) into two groups.

[51] We will jointly refer to *-(e)acht* / *-íocht* forms as *-Vcht*, where V stands for a vowel.

discussion are more complex than it seems. There is a numerous group of forms terminating in -V*cht*, which can function as VNs, although finite verb forms are not attested. There are even more nominals in -V*cht*, apparently devoid of verbal sources, with the regular semantics 'act of V-ing'.[52] We can discern an obvious parallel with forms in -*áil*. In the course of our analysis we will point to similarities existing between the two groups of forms but we will also have to acknowlegde certain discrepancies. It turns out that the actual occurrence of -V*cht* forms with the verbal function of VNs is to some extent regulated by the mechanism of blocking.

5.3.2. Nominals in -*(e)acht* and -*íocht* which act as VNs

As we have said, there are -*(e)acht* forms acting as VNs which lack finite verb forms, which was also true of -*áil* forms. However, in this case the situation is more complex because the suffix in question is also employed as the marker of the category of Nomina Essendi (cf. Doyle 1992: 26-69). The word formation process involved takes adjectives and nouns as the base to form a noun with the semantics 'the state of being (Base)'. An examination of 2414 forms listed in Gussmann and Doyle (1996) shows that about 65% of the forms in question are deadjectival. The majority of attested -*(e)acht* forms featuring in verbal contexts are denominal – 87 nominal compared to 9 deadjectival forms. (Some abstract nouns are themselves derivations whose structure is complex, i.e. they involve a base noun which in most cases denotes an Agent.)

There are also VNs terminating in -*íocht* for which no corresponding verbal dictionary entries can be found. There are more than 600 nouns characterised by this ending. They constitute the output of two derivational processes forming Nomina Essendi. Deadjectival nouns denote 'the state, fact or degree of being A', whereas denominal nouns mean 'the state of being N or the activities peculiar to N'. The ratio of deadjectival abstract nouns to their denominal counterparts is roughly 2 : 1, as in the case of forms in -*(e)acht*. A detailed analysis of these forms can be found in Doyle (1992: 40-43, 63-64). Of all these nouns about 50 have VN counterparts, the overwhelming majority of these being de-nominal.

The question that needs to be addressed is what the relation is between triplets like the following:

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[52] Again, note that the VN usage parallels the existence of regular (uncountable) nominalisations.

N	Abstract noun in -(e)acht	VN
druncaeir 'drunkard'	*druncaeireacht* 'drunkenness'	*ag druncaeireacht* 'boozing'
bádóir 'boatman'	*bádóireacht* ' act of boating'	*ag bádóireacht* ' boating'

Firstly, the agentive nominalisation may be turned into an abstract noun and this noun may later undergo verbalisation (N → Neacht → VN). The identity of form and the fact that each of the attested VNs has a corresponding abstract nominal in *-(e)acht* render analysis 1 very attractive:

bádóir → *bádóireacht* → *ag bádóireacht*

druncaeir → *druncaeireacht* → *ag druncaeireacht*

However, the semantic relationship between the parent Agent noun and the corresponding abstract noun is not uniform. The semantics of the abstract noun in the case of *bádóireacht* 'act of boating' is a function of the meaning of the verb. This option, therefore, should be viewed with suspicion.

Secondly, the agentive nominalisation may be verbalised and then the resulting verb would serve as the base for the abstract noun (N → VN → Neacht):

bádóir → *ag bádóireacht* → *bádóireacht*

druncaeir → *ag druncaeireacht* → *druncaeireacht*

This time we run into a quandary in the case of *druncaeireacht* 'drunkenness'. How can a deverbal nominalisation mean 'the state of being N'.

Thirdly, we cannot rule out the possibility that the verb and the abstract noun are not derivationally related. This option seems to work for *druncaeireacht* but not for *bádóireacht*. In the latter case the verb and noun are semantically related.
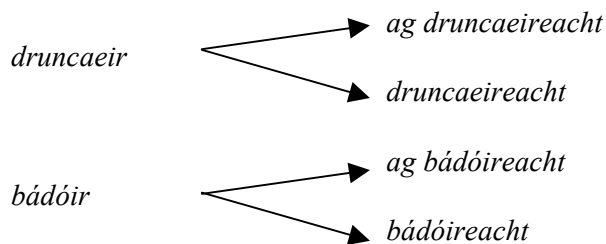
In sum: *bádóireacht* is best described by version 2, whereas option 3 is best suited to account for the semantic relationships of *druncaeireacht*.

Let us now have a closer look at the data, because in order to establish the direction of derivational processes, semantics has to be considered on a par with formal and distributional evidence. 61 of the 87 denominal VNs and

nominalisations in *-(e)acht* and 28 of the 50 forms in *-íocht* have Agents as the base. The resulting nominal denotes characteristics, occupations, functions typical of the base noun, which prompts an N → N analysis. At the same time nouns denoting Agents are perfect candidates for verbalisation. Clark and Clark (1979: 791) write: 'the parent nouns of agent verbs denote agents, things whose predominant feature is that they do certain things. Butchers cut meat professionally; companions accompany people; and tailors make clothes professionally'. The nouns denote roles or professions that people take on deliberately. The agentive reading could be characterised as 'one who V-s volitionally'. This process is not uncommon cross-linguistically. For example, Grzegorczykowa *et al.* (1999: 575-576) describe the so-called *odrzeczownikowe formacje stanowe* (de-nominal state formations) in Polish. These are denominal verbs which express the predicative function of their bases. The noun acts as the base and the suffix replaces the copula verb *be*, e.g. *X jest królem.* 'X is a king' – *X króluje* 'X rules'. The meaning of such derivatives can be expressed as *X is an element of class Y* (*X bears the characteristics of class Y*), i.e. *X króluje.* 'X rules; X belongs to the class of kings'. These formations are transpositional in that the meaning of the resulting derivative has no semantic elements other than those present in the base. In derivatives based on names of professions and positions the structure '*be X*' is interpreted as 'perform duties/actions characteristic of X', e.g. *burmistrzować* 'be/act as/hold the position of mayor', *gospodarzyć* 'be/perform the duties of a farmer', *matkować* 'be/act as a mother'. Some of these denominal formations can be interpreted as '*X has some of the features of Y*' so their meaning is roughly '*behave like X*', e.g. *ślimaczyć się* 'to be/act like a snail/do things at a snail's pace'. These facts render the analysis N (Agent) → (V)VN in Irish quite plausible.

    Doyle (1992: 57-59) draws a distinction between denominal nouns which denote an action, e.g. *bádóir* 'boatman' → *bádóireacht* 'boating' on the one hand, and nouns which denote the domain ruled by the base, e.g. *rí* 'king' → *ríocht* 'kingdom', and Nomina Essendi, e.g. *áibhirseoir* 'devil' → *áibhirseoireacht* 'devilishness' on the other.[53] He regards the two groups as distinct because nouns belonging to the former can be used as VNs in the progressive, whereas nouns belonging to the latter group cannot:

> *Tá sé ag bádóireacht.*   'He is boating.'
> **Tá sé ag ríocht.*   'He is ruling.'
> **Tá sé ag áibhirseoireacht.*   'He is acting the devil.'

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[53] The distinction Nomen Essendi vs. Nomen Actionis is well-established (cf. Szymanek 1989).

Despite this semantic distinction, it frequently happens that we find both VNs and Nomina Essendi with the same base (e.g. *druncaeireacht* 'drunkenness'). We will claim that abstract nouns do not undergo conversion into Vs but rather, Vs (and consequently VNs) are directly derived from parent nouns. If we treat the formation of Nomina Essendi and Nomina Actionis separately, we can account for the fact that in some cases Nomina Essendi coincide in form with VNs which are the source for actional readings, whereas in others only Nomina Essendi are attested, because the VN has not been formed (which is what we expect, if it is the offshoot of a separate WFR). That is why only a fraction of forms in -V*cht* act as VNs and the formative is predominantly associated with Nomina Essendi.

The forms grouped in (68a) pattern according to the following scheme:

$$N \searrow \overset{\displaystyle (V)VN \longrightarrow \text{Action Nominal}}{\text{Nomen Essendi}}$$
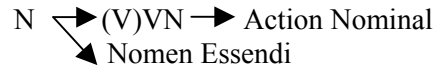
The meaning of the VN and that of the Nomen Essendi is a function of the meaning of the Nomen Agentis. The meaning of the Nomen Actionis is exactly the same as that of the VN, hence it is omitted in the table below for clarity of exposition. For example, *maistíneacht* as a Nomen Essendi means 'rudeness', and it is interpreted as '(act of) misbehaving; being/acting like a rude person' when it is used as a Nomen Actionis. In (68), we have two derivations. The Nomen Essendi is derived directly from the N, while the Nomen Actionis comes from the (V)VN.

(68a)

Agent	VN	Nomen Essendi Nomen Actionis
maistín 'rude person'	ag maistíneacht 'acting rudely, deliberately misbehaving'	maistíneacht 'rudeness'
druncaeir 'drunkard'	ag druncaeireacht 'boozing'	druncaeireacht 'drunkenness'
cocaire 'cocky, cheeky person'	ag cocaireacht le chéile 'sparring at each other '	cocaireacht 'cockiness, impertinence'
bolmán 'windbag'	ag bolmántacht 'talking extravagantly, bragging'	bolmántacht 'windiness, extravagance'
plucaire 'large cheeked person'	ag plucaireacht ar 'cheeking sb'	plucaireacht 'impertinence, cheek'
dodaire 'sullen, sulky person'	ag dodaireacht le fearg 'stuttering with anger'	dodaireacht 'sullenness, jibbing, stuttering'

rógaire 'rogue'	ag rógaireacht 'cheating, playing the rogue '	rógaireacht 'roguery'
mursaire 'domineering person, tyrant'	ag mursaireacht ar dhuine 'lording it over sb'	mursaireacht 'domineeringness, tyranny'
gormaire 'livid-faced, cold-blooded person, sit-by-the-fire'	ag gormaireacht 'seeking warmth, keeping close to the fire'	gormaireacht 'cold-bloodedness, lethargy, desire for warmth'
teallaire 'impertinent person, brat'	ag teallaireacht (le) 'giving impertinence to, answering back'	teallaireacht 'impudence, bratishness'
pápaire 'papist'	ag pápaireacht 'pontificating, talking nonsense'	pápaireacht 'popery, pontification, idle talk'
siúinéir 'joiner, carpenter'	ag siúinéireacht 'doing joinery work'	siúinéireacht 'joinery, carpentry'
doirseoir 'door-keeper'	ag doirseoireacht 'acting as doorkeeper'	doirseoireacht 'occupation of door-keeper'
sagart 'priest'	ag sagartacht 'performing duties of a priest'	sagartacht 'office of priest, priesthood'
gráiscín 'foul-mouthed, obscene person'	ag gráiscínteacht 'using foul language'	gráiscínteacht 'foul-mouthedness, obscenity'
comharsanach 'neighbouring person, neighbour'	ag comharsanacht le duine 'living near sb, behaving in neighbourly fashion towards sb'	comharsanacht 'neighbourhood, vicinity'
clochrán 'recluse, one confined to bed, house'	ag clochránacht (faoin tine) 'moping (over the fire)'	clochránacht 'solitariness, confinement'
graostach 'lewd person' graosta 'lewd, obscene, filthy'	ag graostacht 'talking smut'	graostacht 'lewdness, obscenity, bawdy talk'
plásán 'bland-looking person, smooth, plausible person'	ag plásántacht le duine 'blandishing sb'	plásántacht 'blandness, smoothness, cajolery'

In a few cases with *-íocht* formations we can observe the same pattern, i.e. the nominalisation (Nomen Essendi) and VN are not derivationally related as they are independently formed from the Nomen Agentis:

(68b)

Agent	VN	Nomen Essendi Nomen Actionis
comrádaí 'comrade'	ag comrádaíocht le 'companioning with'	comrádaíocht 'comradeship'
codaí 'indolent, easy-going person'	ag codaíocht thart 'loafing about'	codaíocht 'indolence, laziness'
beachtaí 'critical, captious person'	Ná bí i gcónaí ag beachtaíocht orainn. 'Don't be forever correcting / criticising us.'	beachtaíocht 'exactitude, criticism'
báille / báillí 'bailiff'	ag báillíocht orainn 'watching us closely'	báillíocht 'office of bailiff'
barda 'ward'	ag bardaíocht / bardacht ar dhuine 'bossing '	bardaíocht 'wardship'
buanna 'billeted soldier, domineering person	Bíonn siad ag buannaíocht / buannacht orm. 'They presume on my tolerance, lord it over me.'	buannaíocht 'boldness, presumption'
file 'poet'	ag filíocht ar rud 'lyricising sth'	filíocht 'poetry'
leanbh 'child'	ag leanbhaíocht 'acting childishly, doting'	leanbhaíocht 'childishness'
diabhal 'devil'	ag diabhlaíocht 'making mischief'	diabhlaíocht 'devilishness'

The forms displayed in (69) follow a slightly different pattern: N → (V)VN → Nomen Actionis. There is no Nomen Essendi based on the agentive noun; there is only a Nomen Actionis derived from (and semantically equivalent to) the VN. This corroborates our claim that verbs (VNs) are directly derived from nouns and may then themselves serve as bases for the derivation of verbal nominalisations with the semantics '(act of) V-ing'.

(69a)

Agent	VN	Nomen Actionis
geafaire 'busybody'	ag geafaireacht (ar obair, ar oibrithe) 'overseeing work, workmen' Ná bí ag geafaireacht mar sin orm! 'Don't keep bossing, watching me like that!'	geafaireacht '(act of) overseeing'
bolscaire 'herald, crier, announcer, publicist'	ag bolscaireacht 'crying aloud'	bolscaireacht '(act of) announcing, publicity, propaganda'
siolgaire 'dribbler, needy deprived person'	ag siolgaireacht le hocras 'dribbling'	siolgaireacht '(act of) dribbling, trickling'
meangaire 'smiling person, deceitful person'	ag meangaireacht gháire 'smiling faintly'	meangaireacht '(act of) smiling'
stangaire 'difficult, evasive person, haggler'	ag stangaireacht faoi luach ruda 'haggling over the price of sth'	stangaireacht '(act of) haggling, quibbling'
diúgaire 'drinker, tippler, parasite'	ag diúgaireacht 'sponging, cadging' ag diúgaireacht thart 'scrounging around' ag diúgaireacht airgid orm 'wheediling money out of me'	diúgaireacht '(act of) draining, drinking, (act of) sponging, (act of) crying for favour'
snagaire 'gasper stutterer'	Ná bí ag snagaireacht (ach abair amach é). 'Don't hum and haw about it (but say it out).'	snagaireacht '(act of) gasping stuttering'
cantaire 'chanter, chorister'	ag gol is ag cantaireacht 'crying and complaining'	cantaireacht '(act of) chanting, murmuring, complaining'
bonnaire 'walker, trotter, footman'	ag bonnaireacht thart 'walking, trotting about'	bonnaireacht '(act of) walking trotting'
lapaire 'waddler, clumsy person; wader, paddler'	ag lapaireacht thart 'paddling about'	lapaireacht '(act of) paddling, pawing'
tincéir 'tinker, quarrelsome woman'	ag tincéireacht ar, le rud 'tinkering with sth'	tincéireacht '(act of) tinkering, abusive talk'

learaire 'lounger, loafer'	ag learaireacht thart 'lounging, loitering about'	learaireacht '(act of) lounging, loafing'
bobaire 'trickster'	ag bobaireacht (ar dhuine) 'playing tricks on sb'	bobaireacht 'teasing, trickery'
slapaire 'sloppy person, shoveller'	ag slapaireacht ar fud an tí 'doing the sloppy work around the house'	slapaireacht '(act of) slopping'
fairtheoir 'watcher, sentry'	ag fairtheoireacht 'watching on sentry duty'	fairtheoireacht '(act of) watching'
deithire 'tall lean man, tricky person'	ag deithireacht (magaidh) faoi dhuine 'ribbing, teasing sb'	deithireacht '(act of) tricking teasing'
spaisteoir 'stroller'	ag spaisteoireacht thart, síos is suas 'strolling about, up and down'	spaisteoireacht '(act of) strolling'
sráidí 'street-walker'	ag sráideoireacht / sráidíocht thart 'walking about the streets'	sráideoireacht / sráidíocht '(act of) streetwalking'
feadóir 'idler, leadsman, saunterer'	ag feadóireacht thart 'sauntering, strolling'	feadóireacht '(act of) plumbing, idling, loitering'
slúiste 'layabout, idler'	ag slúisteoireacht thart 'loitering about'	slúisteoireacht '(act of) lounging, idling'

Exactly the same regularity can be observed in the case of forms displayed in (69b). They follow the pattern N→ (V)VN → Nomen Actionis, as the meaning of nominalisations is actional or it follows the lexicalisation path typical of deverbal nominalisations.

(69b)

Agent	VN	Nomen Actionis
plásaí 'flatterer, wheedler'	ag plásaíocht leis an leanbh 'coaxing, trying to please the child'	plásaíocht '(act of) flattering, wheedling'
gliodaí 'wheedler, coaxer'	ag gliodaíocht le duine 'ingratiating oneself with sb'	gliodaíocht '(act of) wheedling, coaxing'
ceardaí 'craftsman'	ag ceardaíocht 'working as a craftsman'	ceardaíocht 'craft, craftwork'
snagaí 'creeper, lifeless person'	ag snagaíocht leis an obair 'dilly-dallying over the work'	snagaíocht '(act of) creeping, dawdling'
scéalaí 'story teller'	ag scéalaíocht ar an tseanaimsir 'telling stories of olden times'	scéalaíocht 'telling stories, gossip'

mágaí 'heavy-footed, sluggish person'	ag mágaíocht thart 'sauntering about'	mágaíocht '(act of) creeping, dawdling, heavy sluggish gait'
dornálaí 'boxer'	ag dornálaíocht 'boxing'	dornálaíocht 'pugilism, boxing'
eachtraí 'adventurer, exile, narrator of adventure stories'	ag eachtraíocht 'telling adventure stories, spinning yarns'	eachtraíocht '(act of) adventuring, journeying, tales of adventure'
fiannaí 'teller of stories of the ancient Fianna, one versed in ancient lore'	ag fiannaíocht 'telling stories of the Fianna'	fiannaíocht 'serving / service in the Fianna, stories of the Fianna, ancient lore'
maraí 'mariner'	Tá na báid ag maraíocht thart. 'The boats are cruising about.'	maraíocht 'seafaring, (act of) sailing, cruising'
staraí 'historian, story teller, gossip'	ag staraíocht orainn 'telling tales, gossiping about us'	staraíocht '(act of) story telling, gossip'
coraí 'wrestler'	ag coraíocht leis an saol 'struggling with life'	coraíocht '(act of) wrestling, '
sporaí 'goader, nagger'	ag sporaíocht ar dhuine 'spurring sb on'	sporaíocht '(act of) spurring'
cleasaí 'playful person or animal, juggler, acrobat'	ag cleasaíocht orm 'playing tricks on me' ag cleasaíocht le rudaí 'juggling with things'	cleasaíocht '(act of) playing, tricking, playfulness, trickery, (act of) juggling, dexterous feats'
tréadaí 'sheperd, pastor'	ag tréadaíocht caorach, bó 'herding sheep, cows'	tréadaíocht '(act of) herding'
gréasaí 'shoemaker'	ag gréasaíocht 'making shoes'	gréasaíocht 'shoemaking'
cluasaí 'listener, eavesdropper'	Bhí siad ag cluasaíocht le chéile. 'They were talking to each others' ears.'	cluasaíocht '(act of) eavesdropping, whispering, talking in a furtive manner'
burla 'burly person'	ag burlaíocht le chéile 'pulling each other around'	burlaíocht '(act of) rolling about, wrestling'

léaspartaí 'humorous droll speaker, spinner of yarns'	ag léaspartaíocht 'telling droll stories, spinning yarns'	léaspartaíocht 'humorous talk, witticism, drollery'
fóisí 'one who does things by fits and starts'	ag fóisíocht timpeall 'darting about'	fóisíocht 'fits of exuberance, spasmodic effort, fits and starts'
óráidí 'orator, speechmaker'	ag óráidíocht 'orating, speech-making'	óráidíocht 'speech-making'

To sum up: there are two productive WFRs in Irish which operate on Agent nominals. One rule is responsible for the formation of Nomina Essendi, and the other forms verbs. Denominal verbs, in turn, serve as the base for actional nominalisations. The latter rule will now be the focus of our attention.

5.3.2. WFR deriving verbs from Nomina Agentis and the rule of -(e)acht affixation

Due to the semantic, syntactic and formal regularities we can put forward a word formation rule which derives verbs from Nomina Agentis.[54]

(70a) $\forall : [X]_{[N, Agent]} : [X] \rightarrow [[X]_{[N, Agent]}]_{[V]}$

$\exists Z: Z = [[X] + \emptyset]$ e.g. druncaeir-
/there is such/   e.g. scéalaí-

The verbs resulting from N $\rightarrow$ V conversion have the following complex root $[[X]_{[N, Agent]}]_{[V]}$. We shall now formulate an affixation rule which is responsible for the formation of non-finite verb forms and nominalisations. These abstract morphological relations are formally realised by a rule of affixation attaching the suffix: *-(e)acht* [əχt]. The suffix *-(e)acht* is attached to bases which terminate in *-óir*, *-(a)ire*, *-éir*, *-án*, *-oir*, *-ach*, *-ín*, *-óg*, *-úir* and in a handful of lexically

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[54] The rule consists of the usual elements:

$\forall$: – Quantifier 'for every X'

X – symbol to be replaced with a lexical item possessing the feature complex

$[[X]_{[N, Agent]}]_{[V]}$ – the derivational operation which specifies that nouns are changed into verbs without any morphophonological exponents.

The affixation rule above states that the MS-Component effects no change on the verbal root.

marked items. It is clearly sensitive to final phonetic strings. *-íocht* is not a separate ending but a contextually conditioned allomorph. It crops up whenever the base terminates in *-í*. The final string *-íocht* in the VN results from the fusion of a word final vowel of the base and the initial vowel of the formative, i.e. [əχt]. Forms such as *barda → bardaíocht, burla → burlaíocht, file → filíocht, diabhal → diabhlaíocht* or *leanbh → leanbhaíocht* where the formal exponent invoved is clearly *-íocht* will be regarded as exceptional.[55]

(71) The *-(e)acht* affixation:

∃ Z: Z = [[X] + (e)acht]	if X = [Yóir]	e.g. turasóireacht
/there is such/	if X = [Yaire]	e.g. diúgaireacht
	if X = [Yéir]	e.g. tincéireacht
	if X = [Yán]	e.g. streancánacht
	if X = [Yoir]	e.g. doirseoireacht
	if X = [Yúir]	e.g. dochtúireacht
	if X = [Yach]	e.g. graostacht
	if X = [Yín]	e.g. maistíneacht
	if X = [Yóg]	e.g. stárógacht
	if X = [Yaí]	e.g. scéalaíocht
	in lexically	
	marked items	e.g. sagartacht
	exception	e.g. bardaíocht

Let us come back to the derivational rule converting Agent nominals into verbs depicted in (70a). The processes of derivation apply to the grammatical representation of a lexeme, in other words, they operate on its grammatical feature inventory. The agentive nominals serving as the input belong to a variety of declensions, so what really matters is the semantic information provided by the base. In Beard's model semantic categories such as Agent, Instrument, Location, Goal may be incorporated into the grammatical representation. Transposition assigns no grammatical function to the derivation and the meaning of the derivation has to be established on the basis of the input. Verbalisation involves the addition of verbal category features: Verb Class and Transitivity, and the neutralising of nominal grammatical features. (70b) spells out in greater detail the generalisation sketched in (70a):

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[55] We have not come across any other examples of this kind, so the number of exceptions is very small.

(70b)

$$
\begin{bmatrix}
+ \text{Singular} - \text{Plural} \\
\text{Noun Class } 1, 2, 3, 4 \\
+ \text{Gender} \\
+ \text{Agent}
\end{bmatrix}
\longrightarrow
\begin{bmatrix}
0 \text{ Singular } 0 \text{ Plural} \\
0 \text{ Noun Class } 1, 2, 3, 4 \\
0 \text{ Gender} \\
\pm \text{ Transitivity} \\
\text{Verb Class ?}
\end{bmatrix}
$$
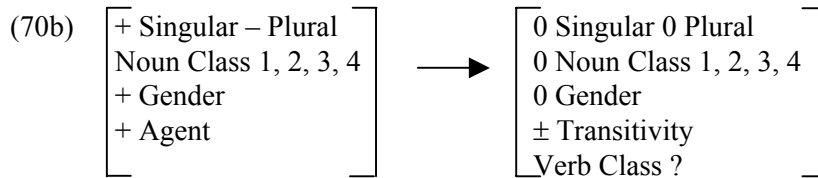
The resulting verbs are either transitive or intransitive. However, it is not evident which conjugation the output should belong to. The fact that the resulting verbs are morphologically complex and polysyllabic does not automatically assign them to Class 2 (cf. first conjugation verbs in -*áil*, which are both polysyllabic and complex). The forms from (67b) could be of some help as they include verbs belonging exclusively to the second conjugation and each verb has a corresponding VN and Nomen Agentis. However, no finite verb forms of the verbs in (69) are attested, so we can't really make the same case for them. We will demonstrate that we are dealing here with a separate lexical class of defective verbs, which are confined to expressing progressive aspect.

Let us first have a closer look at the verbs from (67b).

(72)

V	regular VN	Nomen Agentis	VN
aoirigh 'sheperd, herd'	*aoiriú	aoire 'sheperd, *Ecc:* pastor'	**aoire**acht
tairngir 'fortell, prophesy'	*tairngirt	tairngire 'prophet, wise man, sage'	**tairngr**eacht
cinnir 'lead by the head'	*cinnirt	cinnire 'person leading an animal by the head, guide, attendant'	**cinnire**acht
máistrigh 'master'	*máistriú	máistir 'master, person in control, teacher, skilled person'	**máistr**eacht
giollaigh 'lead, tend, guide, attend to'	*giollú	giolla 'youth, page boy, attendant, man-servant, messenger, fellow'	**giolla**cht
coisigh 'travel on foot, walk'	* coisiú	coisí 'walker, infantryman'	**coisí**ocht
rámhaigh 'row'	*rámhú	rámhaí 'oarsman'	**rámhaí**ocht
tóraigh 'pursue'	*tórú	tóraí 'pursuer'	**tóraí**ocht
rothaigh 'cycle'	*rothú	rothaí 'cyclist'	**rothaí**ocht
marcaigh 'ride'	* marcú	marcach 'horseman'	**marcaí**ocht
ráthaigh '(of fish) shoal'	*ráthú	*	**ráth**aíocht

If we accept rule (70) in its present form we come up against one snag. If we have to do with second conjugation verbs, why are the corresponding VNs not formed from the root by the application of regular formatives, i.e. *-ú* or *-t*? The formation of the VN becomes clear once we take the Agent as the base (recall the affixation rule (71)), on which analysis only *marcaíocht* and *ráthaíocht* will be exceptional. In accordance with our rule of affixation we would expect *marcacht*, and the verb *ráthaigh* is not based on an Agent noun. The latter, however, could easily be accommodated as a product of our WFR if we assume a fairly general specification of the base noun – any noun capable of functioning as the subject of a related verb (cf. subject nominalisations in Bauer 1983: 286). Apart from volitional Agents it will cover animate entities like for example *ráth* 'shoal of fish'.

Interestingly, the ten de-nominal verbs in question occur mostly in their VN forms. The VN formation is best described in terms of the Agent form, which would suggest that it is not verbal roots but rather VNs that are generated by rule (70). Verbal roots look more like back formations which arise after the derivation of VNs. We will now explain why this is the case.

WFRs create lexemes from existing lexemes. The assimilation of a noun used as a verb is a gradual process, which may affect the inflection of the verb. Some derivatives are characterised by incomplete inflectional paradigms. For example, the zero-derived verb *neighbour* occurs mainly in the *-ing* form. Quirk *et al.* (1985: 1029) note that the verb *babysit*, which is a back formation from *babysitting* or *babysitter*, is used mainly in the infinitival form since speakers of English avoid *?babysat* or *?babysitted*. In English, however, these de-nominal verbs can take inflectional suffixes as in *She babysits regularly.* In Irish, of all the forms in (67b) only *tairngir* 'fortell' exhibits the whole range of inflectional forms. Speakers feel reluctant to append finite verbal inflections to a root which looks like a noun, which is why they use periphrasis. In Irish the use of these de-nominal verbs solely in the progressive does not seem to be a matter of personal preference. It is true that the verbs under discussion and other -V*cht* formations exhibit a strong lexical association with the progressive. This, however, turns out not to be the sole factor affecting their usage. If we append inflections to the 'potential' root we come up with forms which are ungrammatical, never attested. Let us consider the first item from the list below; *slapaireacht* which is derived from *slapaire* 'sloppy person' can be used as a VN – *Tá sé ag slapaireacht* 'He is doing sloppy work' but the base which should have become verbal will never accept verbal inflections – **Shlapair sé* 'He did sloppy work'. We need to account for this somehow.

Verbs formed in accordance with our WFR rarely feature in finite contexts because of their strong lexical association with the progressive aspect. We come

up against similar semantic concepts as the ones denoted by denominal verbs in
-*áil*. Some of them are inherently imperfective. Apart from verbs which denote
activities characteristic of Agents, e.g. *ag siúinéireacht* 'doing joinery work', *ag
doirseoireacht* 'acting as doorkeeper', *ag sagartacht* 'performing duties of a
priest', *ag ceardaíocht* 'working as a craftsman', we find verbs referring to
different ways of talking and moving, or being violent or abusive towards others.
These verbs have negative connotations.

(73)

WORK: *ag slapaireacht* 'doing sloppy work ', *ag dadóireacht* 'working along the shore, gathering sea-weed'
STRUGGLING: *ag cocaireacht le chéile* 'sparring at each other ',   *ag coraíocht leis an saol* 'struggling with life'
TALKING: *ag bolscaireacht* 'crying aloud', *ag bolmántacht* 'talking extravagantly, bragging', *ag stangaireacht faoi luach ruda* 'haggling over the price of sth', *ag dodaireacht* 'stuttering', *ag snagaireacht* 'hum and haw', *ag pápaireacht* 'pontificating, talking nonsense', *ag gráiscínteacht* 'using foul language', *ag graostacht* 'talking smut', *ag bearrthóireacht ar a chéile* 'addressing cutting remarks', *ag ceastóireacht ar duine* 'interrogating, cross-examing sb', *ag glagaireacht (chainte)* 'talking nonsense'   *ag óráidíocht* 'orating, speech-making', *ag scéalaíocht* 'telling stories',   *ag eachtraíocht* 'telling adventure stories'
MOVING SLOWLY (walking / loitering):   *ag bonnaireacht thart* 'walking, trotting about', *ag learaireacht thart* 'lounging, loitering about', *ag sráideoireacht thart* 'walking about the streets', *ag feadóireacht thart* 'sauntering, strolling', *ag spáisteoireacht thart* 'strolling about', *ag slúisteoireacht thart* 'loitering about', *ag rámhóireacht thart* 'wandering about', *ag crochadóireacht thart* 'loafing', *ag drádánacht thart* 'loitering about and accosting people',   *ag codaíocht thart* 'loafing about', *ag snagaíocht* 'dawdling', *ag mágaíocht thart* 'sauntering about'
ANNOYING or REPREHENSIBLE BEHAVIOUR: *ag rógaireacht* 'cheating, playing the rogue ', *ag maistíneacht* 'acting the bully, deliberately misbehaving', *ag teallaireacht (le)* 'giving impertinence to, answering back', *ag bobaireacht* 'playing tricks', *ag deithireacht (magaidh) faoi dhuine* 'ribbing, teasing sb', *ag maoirseacht orainn* 'overseeing us, bossing us',   *ag beachtaíocht orainn* 'forever correcting / criticising us', *ag cleasaíocht orm* 'playing tricks on me'

Now, if the restricted usage of the forms above was only a matter of a strong lexical association with the progressive aspect, we would still expect finite forms, as in the case of *-áil* verbs. As these are not available, we have sound grounds to assume that we have to do here with the derivation of imperfective verbs (imperfectiva tantum), i.e. a special class of verbs lexically marked as [+ progressive]. This would imply that the imperfective aspect in Irish is not only a grammatical but also a lexical category.

Ó Corráin (1997: 159-171) focuses on the functional development of the category of aspect in Irish. At some point finite categories lost the possibility of expressing progression,[56] and the opposition perfective/imperfective in Irish is now expressed by the inflected categories of the verb vs. the periphrastic progressive formation. Therefore, in the sentence – *Scríobh sé an litir* 'He wrote the letter' the situation is presented as a single unanalysable whole, i.e. it is viewed punctually, while in *Bhí sé ag scríobh na litreach* 'He was writing the letter', we are dealing with a dynamic situation where overt expression is given to the duration of the situation. In other words the progressive periphrastic construction has become the generalised category of imperfectivity.

This grammatical distinction, however, may not be available for all verbs.[57] For many verbs which lack a complete set of finite forms the usual contrast non-progressive (finite form) vs. progressive (periphrastic) has been replaced by periphrastic non-progressive vs. periphrastic progressive (cf. Ó Siadhail 1989: 304). Periphrastic non-progressive constructions involve a light verb and a nominal (cf. our discussion in 4.3. in chapter 2). Many verbs with a set of finite forms have two means of expressing perfective aspect:

PERFECTIVE	IMPERFECTIVE
Ghlaoigh sé. 'He shouted.' *Lig sé glaoch.* 'He gave a shout/he shouted.'	*Bhí sé ag glaoch.* 'He was shouting.'

---

[56] In early Irish *saidid* could mean 'he sits' (action) or 'he is sitting' (state). In the modern language *suíonn sé* can only denote the action, whereas the state must be expressed nominally *Tá sé ina shuí* 'He is sitting'.

[57] A similar situation may be observed in Polish (cf. Grzegorczykowa *et al.* 1999: 166-167). Only telic verbs referring to processes and causation occur in both the perfective and imperfective aspect, e.g. *leczyć* 'cure', *pisać* 'write'. Otherwise, we distinguish imperfectiva tantum – verbs which have only imperfective aspect such as those referring to states, e.g. *leżeć* 'lie', events – *kapać* 'drip', and actions – *mówić* 'talk', *tańczyć* 'dance', *dotykać* 'touch'. Verbs denoting accidental actions, e.g. *spotkać* 'meet' and acts, e.g. *zaniemówić* 'become speechless' are classed as perfectiva tantum, i.e. verbs which have only perfective aspect.

PERFECTIVE	IMPERFECTIVE
Ghearán sé. 'He complained.' *Dhein sé gearán.* 'He made a complaint/He complained.'	*Bhí sé ag gearán.* 'He was complaining.'

PERFECTIVE	IMPERFECTIVE
Dhiúltaigh sé. 'He refused.' *Thug sé diúltú.* 'He refused.'	*Bhí sé ag diúltú.* 'He was refusing.'

Defective verbs occur only in the progressive and if a non-durative usage is required we have to use the light verb construction:

PERFECTIVE	IMPERFECTIVE
Lig sé osna. 'He gave a sigh/he sighed.' **D'osnaigh sé.*[58]	*Bhí sé ag osnaíl.* 'He was sighing.'

PERFECTIVE	IMPERFECTIVE
Lig sé fead. 'He whistled (once).' **D' fhead sé.*	*Bhí sé ag feadaíl.* 'He was whistling.'

PERFECTIVE	IMPERFECTIVE
Rinne sé obair. 'He did work.' **D'obair sé.*	*Bhí sé ag obair.* 'He was working.'

Similarly, with -V*cht* VNs, there are no options in the perfective available. The light verb construction is obligatory.

PERFECTIVE	IMPERFECTIVE
Rinne sé meangadh. 'He smiled.' **Mheangair sé.*	*Bhí sé ag meangaireacht.* 'He was smiling.'
Rinne sé bob. 'He played a trick.' **Bhobair sé.*	*Bhí sé ag bobaireacht.* 'He was playing tricks.'

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[58] The dictionaries provide *osnaigh*$_V$, but it strikes us as very unusual, as there are no examples given of finite usage.

For this group of VNs, there is no finite verbal base form from which they are regularly formed. Rather, they are derived directly from the agentive noun. Agent nouns, therefore, serve as bases for the derivation of verbs which are lexically [+ progressive], verbs which occur only in their VN form. Note that the corresponding nominalisation available is an uncountable one, and the noun employed in the light verb construction is in most cases a morphologically simplex word, which serves as the base for the derivation of the Agent, e.g. *bob* 'trick'; *Rinne sé bob.* 'He played a trick.'; *bob* → *bobaire* 'trickster'; *ag bobaireacht* 'making practical jokes'; *bobaireacht* '(act of) teasing, trickery'.
We propose a refined version of rule (70):

(74)

a. $\forall : [X]_{[N, \text{Subject}]} : [X] \rightarrow [[X]_{[N, \text{Subject}]} + \text{suffix}]_{[VN]}$

b.
$$
\begin{bmatrix} + \text{Singular} - \text{Plural} \\ \text{Noun Class 1, 2, 3, 4} \\ + \text{Gender} \\ + \text{Subject} \end{bmatrix} \longrightarrow \begin{bmatrix} 0 \text{ Singular } 0 \text{ Plural} \\ 0 \text{ Noun Class 1, 2 3, 4} \\ 0 \text{ Gender} \\ \pm \text{ Transitivity} \\ \text{Verb Class} + \text{progressive} \end{bmatrix}
$$

This abstract derivational relationship will be spelt out by means of the affixation rule in (71).

5.3.4. Nominals in -Vcht in ÓD which are not listed as VNs
If we are dealing with a productive word formation process how do we account for the fact that ÓD lists 174 forms similar to forms in (68a), and 371 forms similar to (69a), which seem to lack corresponding VNs? There are over 500 agentive nouns which seem to serve only as bases for the derivation of abstract nominals. This is strange as we cannot point to any formal or semantic discrepancies between the two groups. The forms listed in (75a) correspond to those listed in (68a):

(75a)

Nomen Agentis	Abstract Noun	VN
stíobhard 'steward'	stíobhardacht 'stewardship'	?
glaigín 'empty-headed, silly talker'	glaigíneacht 'empty, silly talk'	?
oidhre 'heir'	oidhreacht 'inheritance, legacy'	?
braobaire 'rude, insolent person'	braobaireacht 'rudeness, insolence'	?
feolaire 'butcher'	feolaireacht 'butchery'	?
meisceoir 'drunkard'	meisceoireacht 'drunkenness'	?

criadóir 'ceramist, potter'	criadóireacht 'ceramics, pottery'	?
cábóg 'clodhopper, clown'	cábógacht 'clownishness'	?
dreolán 'silly person'	dreolánacht 'silliness'	?
góiséir 'hosier'	góiséireacht 'hosiery'	?

The forms listed in (75b) correspond to those in (69a).

(75b)

Nomen Agentis	VN	Abstract Noun
spailpín 'seasonal, hired labourer, scamp'	?	spailpínteacht '(act of) working as a migratory farm worker, (act of) scamping'
cócaire 'cook'	?	cócaireacht '(act of) cooking'
nascaire 'binder'	?	nascaireacht '(act of) binding'
failpéir 'sponger, toady'	?	failpéireacht '(act of) sponging, toadying'
fuirseoir 'harrower'	?	fuirseoireacht '(act of) harrowing'
truiceadóir 'trickster'	?	truiceadóireacht '(act of) playing tricks'
lapadán 'toddler'	?	lapadánacht '(act of) toddling'
banaltra 'nurse'	?	banaltracht '(act of) nursing'
gearrthóir 'cutter'	?	gearrthóireacht '(act of) cutting'

How do we account for the non-occurrence of these VNs? We will claim that we are dealing here with potential VNs, though in some situations their occurrence is actually blocked (cf. Aronoff 1976: 43-45), which means that even though they are potentially derivable they are not attested in actual usage.

First of all, we may have to do with the same kind of lexicographic inconsistency that we witnessed with *-áil*. The fact that ÓD does not provide a VN usage, does not mean that it is not possible to use the forms in *-(e)acht* in this way. For instance, de Bhaldraithe (1953: 197) uses the first item in (75b) as a VN:

(76)
ag spailpínteacht a bhí   tú ó mhaidin agus codladh a bheith ort
PRT scamp-VN PRT be-past you from morning and   sleep PRT be-VN on-you
'You were sleeping and scamping from morning.'

Secondly, the actual appearance of a complex potential lexeme is thwarted if there are forms with the same root and the same meaning. A similar mechanism has been proposed by Clark and Clark (1979: 798) who argue that the actual occurrence of innovative verbs is regulated by the Principle of Pre-emption by

Synonymy, which says that 'if a potential innovative denominal verb would be precisely synonymous with a well-established verb, the innovative verb is normally pre-empted by the well-established verb, and is therefore considered unacceptable.' In practice this means that *hospital* cannot be used with the meaning 'put into a hospital' due to the existence of a well-established verb *hospitalize*. Pre-emption by synonymy may, among other things, result from entrenchment and ancestry. In the first case one idiomatic denominal verb prevents the formation of a second denominal verb with the same meaning (entrenchment). Therefore, two denominal verbs from the same parent noun must contrast in meaning, e.g. *winter* vs. *winterize*. In the case of ancestry some denominal verbs are pre-empted because the parent nouns are themselves formed from verbs that are synonymous with their grandchildren. *butcher the meat* is acceptable whereas *baker the bread is not due to the existence of *bake*. Let us now check whether this principle is applicable to Irish.

The actual occurrence of an innovative VN[59] derived from a Nomen Agentis is blocked if there exists a corresponding verb which has a regular verbal noun which serves as the base for the derivation of the Nomen Agentis. Some of these Agentive Nouns are claimed to be derived from the genitive case of the VN (Doyle 1992: 75-86). In our analysis the so-called genitive form of the VN is a positional variant of the active participle (cf. section 2.3. in chapter 2).
(77a)

V	VN	VN-gen. (= VA)	Nomen Agentis	VN derived from NA
buail 'hit'	bualadh	buailte	buailteoir	#
cáin 'punish'	cáineadh	cáinte	cáinteoir	#
nigh 'wash'	ní	nite	niteoir	#
ceannaigh 'buy'	ceannach	ceannaithe	ceannaitheoir	#

Vicious circles in word-formation are avoided, especially, if the resulting form is to have the same meaning.

(77b)   V (VN) $\rightarrow$ Nomen Agentis   — # $\rightarrow$ V (VN)

However, the blocking of nominals in *-(e)acht* does not always take place. This is a possibility, because the potential verbs derived from Agents may serve as the input for other WFRs, i.e. those generating action nominalisations. These nominalisations appear in actual use when their meanings do not equal the

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[59] More precisely, an innovative imperfective verbal root, which occurs only in its VN form.

meanings of the nominals derived from parent verbs. Otherwise, we would violate the requirements of entrenchment and ancestry. So the blocking of the verb does not automatically entail the blocking of a nominalisation. The differences in meaning denoted by the regular action nominalisation and the one based on a denominal verb can be very fine indeed. One may refer to the action as a general phenomenon, i.e. it is confined to the regular reading '(act of) V-ing', whereas the other is used predominantly to denote the result or a single instance of that action, or vice versa. Their actual usage may also be regulated by stylistic considerations. The table in (78a) illustrates the blocking of de-nominal VNs, which is not accompanied by the blocking of nominals in -*(e)acht*. Note the differences in the meaning of nominals.

(78a)

Verb/VN	Nomen Actionis	Agent	V (VN in -(e)acht)	Nominal in -(e)acht
breab, -adh 'bribe'	breabadh '(act of) bribing'	breabaire 'briber'	#	breabaireacht 'bribery'
srac, -adh 'pull, drag, struggle'	sracadh 'pull, jerk, piece torn off, strength and spirit, extortion, pluck'	sracaire 'puller, tearer, extortioner'	#	sracaireacht '(act of) pulling, tearing, extortion'
nasc, -adh 'bind'	nascadh 'binding, bond, obligation'	nascaire 'binder'	#	nascaireacht '(act of) binding'
foirgnigh, -ú 'build'	foirgniú '(act of) building'	foirgneoir 'builder'	#	foirgneoireacht 'building, construction'
gin, -iúint 'give birth to, beget, generate'	giniúint 'procreation, conception, birth, reproduction, generation, embryo, progeny'	gineadóir 'begetter, sower, generator'	#	gineadóireacht '(act of) generating'

As in the case of -*(e)acht*, the process of blocking the actual appearance of VNs in -*(a)íocht* based on Agent nouns takes place if a verb formed on the same root already exists. This is so because the Nomen Agentis and the simplex verb are derivationally related. However, the derivation of the abstract noun is not blocked. There are about 40 items of this sort.

(78b)

Verb/VN	Nominalisation	Nomen Agentis	V(VN in -(a)íocht)	Abstract Noun in -(a)íocht
feac,-adh 'bend, yield'	feacadh 'bend, bent posture'	feacaí 'bender, yielder'	#	feacaíocht '(act of) bending, yielding'
tacaigh, -cú 'support'	*	tacaí 'supporter'	#	tacaíocht 'support, backing, security, guarantee'
íoc, íoc 'pay, requite'	íoc 'payment, charge, requital'	íocaí 'payee'	#	íocaíocht '(act of) paying, payment'
dearc, -adh 'look, behold'	dearcadh 'look, viewpoint, vision'	dearcaí 'look-out man, watchman'	#	dearcaíocht '(act of) watching, watchfulness'
slad, slad 'plunder, destroy'	slad 'plunder, devastation'	sladaí 'plunderer'	#	sladaíocht '(act of) plundering, pillaging, looting'
ionadaigh, -dú 'place, position, appoint as representative substitute'	ionadú 'replacement, substitution'	ionadaí 'representative substitute, deputy'	#	ionadaíocht 'representation, replacement'
talmhaigh, -ú 'dig (oneself) in, cover with earth'	talmhú 'earthing, earth-cable'	talmhaí 'agriculturist'	#	talmhaíocht 'argriculture'
saothraigh, -rú 'labour, toil, till, earn'	saothrú 'cultivation, earnings'	saothraí 'labourer, toiler'	#	saothraíocht 'hard work, strenuous effort'
beartaigh, -tú 'brandish, plan, decide'	beartú 'plan, scheme'	beartaí 'schemer, contriver'	#	beartaíocht '(act of) scheming, ingenuity'
fostaigh, -ú 'catch, employ'	fostú 'catching, entanglement, engagement, employment'	fostaí 'employee'	#	fostaíocht 'employment'

There are differences in meaning between the regular deverbal nominalisations in the second column, and the nominalisations in *-(a)íocht* derived from blocked potential VNs, which are blocked due to the existence of verbs (and VNs) with the same root. The nominalisations are not blocked because their meaning does not equal the meaning of nominalisations in *-adh, -ú etc*. They are related to distinct senses of the verb. However, there is no semantic pattern in this distribution of meaning. Regular nominalisations may allow a general unrestricted interpretation, while the nominalisation in *-(a)íocht* may have a specialised tinge, or may be narrowed to only one of the meanings represented by its regular counterpart. There are no hard and fast rules. This situation sheds some light on the phenomenon of blocking, which should not be conceived of as a constraint regulating the productivity of WFRs but rather, as Scalise (1986: 157) puts it, 'the expression of a tendency towards economy in the lexicon.' The Irish data corroborate this claim.

However, some of the *-(a)íocht* nominalisations are not de-verbal, so there is no blocking of potential verbs because there is nothing to be blocked. Many of the nouns in *-(a)íocht* are the result of language planning, e.g. *talmhaíocht* and *fostaíocht* in (78b) were coined for English 'agriculture' and 'employment'. We cannot rule out the possibility that in some examples *-(a)íocht* nominals are, in fact, Nomina Essendi formed directly from Agents. This is a different WF operation, which has nothing to do with verbs, so the absence of VNs in *-(a)íocht* is something to be expected. With *fostaíocht – fostaí, íocaíocht – íocaí* we are clearly dealing with the influence of English *-ee*. The direction was probably *fostaíocht* (employment) → *fostaí* (employee). So, in one case we have potential VNs which are blocked, in another we simply have Nomina Essendi derived from nouns. There is no VN, potential or otherwise. On the other hand, this is not to say that all forms for which no simpler verbal root is available are only Nomina Essendi. There are about 67 forms in *-(a)íocht* with the regular de-verbal semantics '(act of) V-ing' like those listed in (79), i.e. forms derived from Nomina Agentis for which no corresponding VNs with the same root are attested. These Agents are either morphologically simplex or de-nominal. They act as an input to the rule (74), and the potential verbs thus produced are bases for the formation of actional nominalisations. As these Nomina Agentis are not derived from verbs, there is no context for the blocking of potential verbs.

(79)

V	Nomen Agentis	Potential VN	Nominalisation
*	gleacaí 'wrestler, acrobat, trickster'	? ag gleacaíocht	gleacaíocht '(act of) wrestling, acrobatics, trickstery'
*	leadaí 'idler'	? ag leadaíocht	leadaíocht '(act of) idling, loafing, idleness, laziness'
*	piollardaí 'playboy, rake'	? ag piollardaíocht (attested in Dinneen)	piollardaíocht '(act of) amusing oneself, sporting'
*	seanchaí 'custodian of tradition, reciter of ancient lore'	? ag seanchaíocht (attested in Dinneen)	seanchaíocht '(act of) telling old stories, discussing old events'
*	nathaí 'aphorist, witty person'	? ag nathaíocht	nathaíocht '(use of) adages, aphorisms'
*	crúcálaí 'clawer, pawer'	? ag crúcálaíocht	crúcálaíocht '(act of) clawing, pawing'
*	bulaí 'bully'	? ag bulaíocht	bulaíocht '(act of) bullying'
*	banaí 'ladies' man, lady killer'	? ag banaíocht	banaíocht '(act of) company keeping with women'
*	deoraí 'wanderer, exile, stranger,'	? ag deoraíocht	deoraíocht 'wandering, exile'
*	breachtraí 'charm worker'	? ag breachtraíocht	breachtraíocht '(act of) charm-working, charms associated with herb-cures'

If the meaning of the V (attested only in the VN usage) derived from a deverbal Nomen Agentis is not equivalent to that of the parent verb, it is attested in actual use. The meaning does not necessarily have to be completely different. If there is any difference whasoever, the two forms may occur. One of them may, for example, be restricted to only one of the many readings available to the parent verb.

(80)

Verb	Regular VN	Agent	V (VN in -(e)acht/ -(a)íocht)
croch, 'hang'	ag crochadh 'hanging'	crochadóir 'hangman, gallowsbird, loafer'	ag crochadóireacht 'loitering, hanging around'
diúg, 'drain, drink to the dregs, suck, sponge on'	ag diúgadh 'draining (of liquid, of vessel), sponging'	diúgaire 'drinker, tippler, parasite, sponger'	ag diúgaireacht 'draining of liquid, drinking, tippling, sponging, wheedling, scrounging, whimpering, crying for favour'
barr 'top, surpass'	ag barradh 'topping, surpassing'	barraí 'champion, superior person'	duine a bharraíocht 'to best sb' Is deacair an saol a bharraíocht. 'It is difficult to understand, cope with life.'
can, 'chant, sing'	ag canadh 'chanting, singing'	cantaire 'chanter, chorister'	ag cantaireacht 'complaining'
bearr, 'cut, clip, trim'	ag bearradh 'cutting, trimming'	bearrthóir 'trimmer, sharp-tongued person'	ag bearrthóireacht 'addressing cutting remarks to each other'
scéalaigh[60] 'relate'	ag scéalú 'relating'	scéalaí 'story-teller, bearer of news'	ag scéalaíocht ar an tseanaimsir 'telling stories of olden times' ag scéalaíocht ar a chéile 'telling stories about each other, informing one another'

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[60] This example may demonstrate how the verbal paradigm has evolved and that it is connected with semantic changes. There was a V *scéalaigh* meaning 'tell stories', which seems to be obsolete now in this sense, thus:

Early Mod. Irish	Mod. Irish
Scéalaigh sé. 'He told a story.' *ag scéalú*	*D'inis sé scéal.* 'He told a story.' *ag scéalaíocht*

There are also quite a few counterexamples to this neat generalisation as far as regular VNs and VNs in -V*cht* with the same meaning are concerned, as we come across doublets. This shows that blocking is no more than a tendency:

(81)

Verb	Regular VN	Agent	(V)VN in -(e)acht/-(a)íocht
iasc 'fish'	ag iascach 'fishing'	iascaire 'fisherman'	ag iascaireacht 'fishing'
dornáil 'fist, box, fight with fists'	ag dornáil 'boxing'	dornálaí 'boxer'	ag dornálaíocht 'boxing'
eachtraigh 'relate, narrate adventure stories'	ag eachtraí ar na Fianna 'relating (wonder) stories of the Fianna'	eachtraí 'adventurer, exile, narrator of adventure stories'	ag eachtraíocht 'telling adventure stories, spinning yarns'
beachtaigh 'correct, criticise'	ag beachtú orm 'correcting, criticising me'	beachtaí 'critical, captious person'	Ná bí i gcónaí ag beachtaíocht orainn. 'Don't be forever correcting, criticising us.'
spor 'spur, incite'	duine a sporadh 'spur sb on'	sporaí 'goader, nagger'	ag sporaíocht ar duine 'spurring sb on'

We can observe the following tendency: if there is a verb which serves as the base for the derivation of an Agent, another VN form based on the Agent is blocked, unless the resulting VN is characterised by a different meaning. If the Agent which serves as the base for the VN is itself not a de-verbal formation, there is no blocking whatsoever and the corresponding -V*cht* forms are potential VNs.

The restrictions on the actual occurrence of nominalisations derived from potential blocked VNs do not seem so severe, i.e. it is possible to encounter a nominalisation in -V*cht* without a corresponding VN. This may be due to a number of factors. Firstly, the meaning of the nominalisation will always differ to some extent from the meaning of the nominalisation based on the original verbal root. Secondly, -V*cht* nominalisations may be Nomina Essendi directly derived from Agent nouns.

5.3.5. VNs which are not the offshoot of WFR (74)

Let us examine more closely those VNs whose parent nouns are not Agents. We have come across about 15 such forms in *-(e)acht* and about 10 such forms in *-íocht*.

(82a)

| N	VN
circín 'chicken-dim.'	ag circíneacht le 'pecking at'
cloigín 'bell-dim.'	ag cloigíneacht 'bell-ringing, crying out, scolding'
cáirín 'little mouth, grimace'	ag cáiríneacht ar a chéile 'making faces at each other'
geidimín 'flutter, excitement, flighty creature'	ag geidimíneacht (thart) 'fluttering about'
blaisín 'smack, flavour'	ag blaisínteacht ar bhia, ar dheoch 'tasting food, drink, on lips' Níl tú ach ag blaisínteacht air. 'You are only nibbling at, sipping it.'
sróinín 'nose-dim., nose-ring'	ag sróinínteacht thart 'nosing about'
ailpín 'lump, chunk dim.'	ag ailpínteacht le rud 'taking bites, chunks out of sth'
cleitín 'feather-dim.'	ag cleitínteacht le 'fingering lightly, fiddling with'
mín 'smooth, fine thing or part'	ag mííníneacht 'niggling, splitting hairs'
streachlán 'straggling thing, tattered, untidy thing'	ag streachlánacht thart 'dragging one's feet around'
stócán 'post, stake'	ag stócántacht orm dul leis 'pressing me to go along with him'
goineog 'stab, cutting remark'	ag goineogacht (chun a chéile) 'making stinging remarks (to…)'
seanmóir 'sermon'	ag seanmóireacht ón altóir 'preaching from the altar' ag seanmóireacht le duine 'preaching to sb'
cóisir '(wedding) feast'	ag cóisireacht 'attending parties, social gatherings'
léithireacht 'slight dry cough'	ag léithireacht 'coughing, hacking'

(82b)

N	VN
seal 'turn'	ag sealaíocht le chéile 'relieving, spelling each other'
cairdeas 'friendship'	ag cairdeasaíocht le duine 'fraternising with sb'
uain 'time, interval'	Bhí siad ag uainíocht ar a chéile. 'They were taking turns.'
aer 'air'	ag aeraíocht 'taking the air'
grian 'sun'	ag grianaíocht leis an leanbh 'amusing the child'
méar 'finger'	ag méaraíocht ar ghruaig 'passing fingers through hair' Níl sé ach ag méaraíocht ar a chuid. 'He's only fiddling with his food.'
ganfhios 'secrecy'	ag ganfhiosaíocht 'acting surreptitiously'
gar 'service, turn, favour'	ag garaíocht do dhuine 'doing turns, odd jobs for sb'
cuairt 'visit'	ag cuartaíocht 'visiting'
comhar 'mutual assistance, partnership'	ag comhairíocht le chéile 'cooperating with each other'

    The nouns in the first column in (82a) apart from the first item (*circín* 'chicken-dim.') do not denote Agents (Subjects of related verbs), hence they do not qualify as bases for the rule in (74). Wigger (1972: 210) suggests that there is a WFR forming VNs from diminutives with an instrumental meaning, or expressing the idea of 'repeated and reduced action', or meaning no more than 'fiddling, fingering'. The base nouns in (82a), however, are not all diminutives. It is worth noting that the nouns in question are characterised by the same final phonetic strings as those to which the affixation rule in (71) is sensitive. Maybe they are analogical formations.[61] Analogical formations frequently arise because of a chance phonetic resemblance. However, as there are quite a few of them, we will argue for the existence of another WFR. Apart from rule (74), where the base for the derivation of Vs is a volitional Agent or an animate entity or any noun capable of functioning as the subject of a related predicate, there is a different and at the same time very general transpositional rule N → V, where the resulting verb is inherently imperfective.

(83a) $\forall : [X]_{[N]} : [X] \rightarrow [[X]_{[N]} +$ morphophonological modification $]_{[VN]}$

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[61] We follow Bauer (1983: 96) by regarding an analogical formation as 'a new formation clearly modelled on one already existing lexeme, and not giving rise to a productive series'.

(83b) $\begin{bmatrix} + \text{ Singular} - \text{Plural} \\ \text{Noun Class 1, 2, 3, 4} \\ + \text{Gender} \\ \\ \end{bmatrix} \longrightarrow \begin{bmatrix} 0 \text{ Singular 0 Plural} \\ 0 \text{ Noun Class 1, 2, 3, 4} \\ 0 \text{ Gender} \\ \pm \text{ Transitivity} \\ \text{Verb Class} + \text{progressive} \end{bmatrix}$
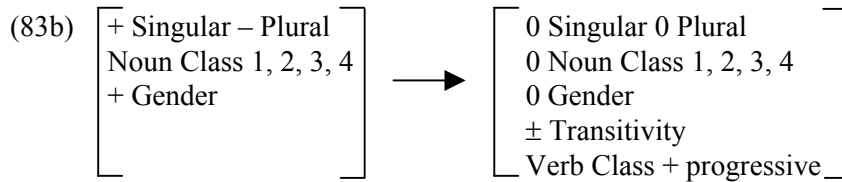
Two similar rules are also attested in Polish. In Polish de-nominal verbs arising as a result of transposition are divided into two groups: *formacje stanowe* (state formations), e.g. *królować* 'be/act as king' and *formacje zdarzeniowe* (event formations), e.g. *koncertować* 'concert + ować; give a concert' (cf. Grzegorczykowa *et al.* 1999: 574-576). So far we have dealt with the Irish counterparts of state formations. We will now demonstrate that the forms in (82) are related to event formations. Verbs belonging to this group in Polish are fairly varied. Firstly, we find here verbs derived from names of events (even though the usual direction of derivation is the opposite, i.e. we derive names of actions from verbs), which are themselves deverbal formations, e.g. *czaić się* 'lurk, lie in wait' → *czaty* 'watch, wait' → *czatować* 'be on the look-out'; *warczeć* 'to whirr' → *warkot* 'whirr, throb' → *warkotać* 'to whirr, throb'. This group includes verbs referring to sound effects, e.g. *stukotać* 'to rattle', *klekotać* 'to clatter, chatter', *tupotać* 'to stamp'. Secondly, we find verbs like *wiecować* 'to take part in a mass meeting', *koncertować* 'to give a concert', *balować* 'to take part in a ball', *spiskować* 'to plot', which are derived from nouns referring to complex situations in which the subject of a related clause is entangled. One can organise a meeting, come to a meeting, take part in a meeting, but *X wiecuje* only means 'X takes part in a meeting'. Similarly, *X koncertuje* can only mean 'X gives a concert'. Thirdly, the resulting verb may reflect the meaning of collocations made up of a verb and the base noun, e.g. *bzikować* 'go mad' – *mieć bzika* 'have a screw loose', *wagarować* 'to play truant'– *chodzić na wagary* 'to play truant'.

Returning to Irish, we think that a similar process might be at work in the case of the forms in (82). They resemble event formations of the second and third type. The imperfective verbs will describe actions, states, situations somehow connected with the base noun.[62] They frequently amalgamate the meanings of the noun and the verb which it collocates with, e.g. *goineog* 'stinging remark' – *ag goineogacht* 'making stinging remarks'; *seanmóir* 'sermon' – *ag seanmóireacht* 'delivering a sermon, preaching'; *cóisir* 'feast' –

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[62] It is not of immediate interest to us how these VNs are formed. Roughly, nouns terminating in certain endings such as *-óir*, *-án*, *-ir*, *-acht*, *-in*, *-óg*, require the affixation rule attaching *-(e)acht*. Otherwise, we attach *-íocht*. This generalisation again would have to admit of some exceptions.

ag cóisireacht 'attending parties, social gatherings'; *gar* 'service, turn, favour' – *ag garaíocht* 'doing turns, odd jobs for sb'; *cuairt* 'visit' – *ag cuartaíocht* 'paying a visit, visiting'.

Some of the verbs from (67), later discussed in (72), could actually be treated as backformations related to this WFR rather than the one based on Agents. For each VN a simpler base is available and the VN can be formed by the addition of *-íocht*. Then, *marcaíocht* will no longer be exceptional.[63]

(84)

Noun	Nomen Agentis	VN	Verb
marc 'horse'	**marc**ach 'horseman'	**marc**aíocht	**marc**aigh 'ride'
rámh 'oar'	**rámh**aí 'oarsman'	**rámh**aíocht	**rámh**aigh 'row'
roth 'wheel'	**roth**aí 'cyclist'	**roth**aíocht	**roth**aigh 'cycle'

If we analyse the forms in (82) as well as other forms in -V*cht* we shall observe a similar blocking mechanism as in the case of forms based on Nomina Agentis. A potential VN is blocked if there is a verb possessing the same root and meaning (85a). It is not blocked despite the existence of the verb if there is a difference in meaning (85b). This generalisation will have to admit of some exceptions (85c).

(85)

	Verb / regular VN	regular nominalisation	Noun	VN in -Vcht	nominalisation in -Vcht
a.	ceadaigh, -ú 'permit, allow'	ceadú 'permission, sanction'	cead 'leave, permission'	#	ceadaíocht 'permissiveness, permission'
	logh, -adh 'remit, forgive'	logadh 'remission, forgiveness'	logha 'indulgence allowance, loan'	#	loghaíocht '(act of) remitting, remission'
b.	sáraigh, -ú 'violate, thwart, overcome'	sárú 'violation, thwarting, overcoming'	sár 'violation, outrage'	ag sáraíocht 'contradicting, arguing'	sáraíocht '(act of) contending, disputing, argument'
	grian, -adh 'sun'	grianadh 'sunning, basking, solarisation'	grian 'sun'	ag grianaíocht leis an leanbh 'amusing the child'	grianaíocht '(act of) sunning, basking'

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[63] The only trouble with this interpretation is that *marc* 'horse' is completely obsolete.

c.	bolaigh, -lú 'smell, scent'	bolú le rud 'smelling, sniffing at sth' ag bolú timpeall 'nosing about'	boladh 'smell, scent'	ag bolaíocht ar rud 'smelling, sniffing at sth' ag bolaíocht thart 'nosing about'	bolaíocht '(act of) smelling, sniffing'

Consequently, our WFR does not have to be restricted to Agent nouns: any noun may be turned into a verb provided that a verb with the same root does not already exist, or if it does the new formation must be different in meaning.

That the general verbalising process sketched in (83) is really at work in Irish is additionally confirmed by the existence of numerous VNs (i.e. imperfective verbs) formed from abstract nouns denoting acts, actions and states by conversion. The formal aspect of the general transpositional rule deriving event formations (i.e. the distribution of the various affixes including zero) definitely merits a separate study.

(86)

N	VN
doghra 'misery, sorrow'	ag doghra 'sorrowing' ; Bhí siad ag caoi agus ag doghra. 'They were weeping and lamenting.'
staidéar '(act of) studying'	ag staidéar go dian 'studying hard'
cránán 'grief, annoyance'	ag cránán 'grieving, complaining'
gearnaíl 'restlessness'	ag gearnaíl 'be restless, uneasy'
ábhaillí 'playfulness' (cf. ábhailleacht (NE) in (87) below)	ag ábhaillí 'tinkering with things'
béadán 'gossip, slander'	ag béadán 'prating, gossiping'
iomlacht 'ferry, passage' – iomlachtadh '(act of) ferrying'	ag iomlachtadh thar an bhfarraige 'plying across the sea'
iomarbhá '(act of) contending, dispute'	ag iomarbhá leis an mbás 'struggling with death'
iomaidh 'rivarly, competition'	ag iomaidh (le) 'competing, vying with'
ceisneamh '(act of) complaining, complaint'	ag ceisneamh ar an saol 'grumbling about (the hardships of) life'
seafóid 'nonsense'	ag seafóid 'talking nonsense'
fálróid '(act of) sauntering'	ag fálróid thart 'wandering about'
forrachtadh 'violence, oppression'	ag forrachtadh ar dhaoine 'oppressing people'

bruíonachas 'quarrelsomeness'	ag bruíonachas 'quarrelling, causing trouble'
longadán '(act of) swaying, rocking'	Bhí sé ag longadán anonn is anal. 'He was swaying back and forth.'
forcamás 'watchfulness, attention'	ag forcamás ar 'looking to, attending to'
súr '(act of) searching, seeking'	ag súr troda 'looking for fight'
tormas '(act of) carping, sulking'	ag tormas ar bhia 'carping at food'
torann 'noise'	ag torann 'making a noise'
gnóthachan '(act of) winning'	ag gnóthachan (ar rud) 'winning, gaining by sth'
cnáfairt 'bones, remains of food'	ag cnáfairt a mhéar 'sucking his fingers'
costadh 'provisions, maintenance'	ag costadh síthe 'maintaining place'
ábhacht 'drollery, jest'	Ní raibh mé ach ag ábhacht. 'I was only joking.'
batalach 'bullying shouts'	ag batalach ar dhuine 'threatening, bullying sb'

In about 9 cases the *-acht* VNs are the same in form as deadjectival Nomina Essendi. We shall not delve into whether the VN is related to the adjective or modelled on the abstract noun, as there are simply too few forms to draw tenable conclusions.[64]

(87)

Adjective	Abstract Noun	VN
dalba 'bold, bad-tempered'	dalbacht 'boldness, audacity'	ag dalbacht '(of child) petting, sulking'
coimhdeach 'accompanying, attendant'	coimhdeacht 'accompaniment, companionship'	ag coimhdeacht 'accompanying, escorting'
spadánta 'sluggish, lethargic'	spadántacht 'lethargy, sluggishness,'	ag spadántacht 'acting sluggishly'

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[64] We cannot rule out the possibility that we are dealing here with de-adjectival verbs. In Polish there is transpositional derivation of this kind. The resulting de-adjectival transpositions referred to as *formacje stanowe* (state formations) express verbally the predicative function of adjectives, e.g. *X jest chory* 'X is ill' = *X choruje*, where *choruje* is 3rd person sg. ind. of the de-adjectival verb *chor-ow-ać* 'be ill'. Grzegorczykowa *et al.* (1999: 570) point out, however, that pure de-adjectival transpositions with the semantics equivalent to 'be + adjective ' are few and far between.

leamh 'weak, impotent, soft '	leamhaireacht 'softness, foolishness'	ag leamhaireacht le 'being soft with, dealing ineffectively with'
gáirsiúil 'lewd, obscene'	gáirsiúlacht 'lewdness, obscenity'	ag gáirsiúlacht 'talking smut'
teorantach 'limiting, bordering, contiguous'	teorantacht '(act of) bounding, bordering, contiguity'[65]	ag teorantacht le 'bordering on' Táimid ag teorantacht le chéile. 'Our lands adjoin.'
falsa 'false, lazy'	falsacht 'falseness, laziness'	ag falsacht 'lazing, idling'
scáthánach 'reflecting, specular'	scáthánacht '(act of) reflecting as in mirror, considering'[66]	ag scáthánacht ar rud 'considering sth'
ábhailleach 'playful, mischievous'	ábhailleacht 'playfullness, mischievousness'	ag ábhailleacht le rudaí 'tinkering with things' páistí ag ábhailleacht 'children playing mischievously'

As the regularity of WFRs manifests itself in the fact that they operate on classes and not individual lexemes, we will regard the above examples as belonging to the realm of the lexicon.

5.3.6. *-aíl [iːlʹ] formations*
The discussion of *-Vcht* forms prompts the presentation of another suffix which is a marker of de-nominal VNs. Viewed as an exponent of the morphomic function F_{VN}, *-aíl* [iːlʹ] has to be regarded as unproductive, and the verbs taking it have to be lexically marked.

(88)

Verb	**VN**	**Noun**
glam [glɑm] 'bark'	glamaíl [glɑmiːlʹ]	glam 'deep bark, bay, howl'
osnaigh [osnəgʹ] 'sigh'	osnaíl [osniːlʹ]	osna 'sigh'
sceamh [ʃkʹav] 'yelp'	sceamhaíl [ʃkʹaviːlʹ]	sceamh 'yelp, squeal'

However, the number of *-aíl* formations functioning as VNs or nominalisations with the regular semantics '(act of) V-ing' far exceeds the meagre set above. All in all, there are over 90 such forms in ÓD. Doyle and Gussmann (1996) list over

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[65] Alternatively, it is *teorainn*_N 'border' → *teorantacht* _{VN} '(act of) bordering'.
[66] Possibly, the derivation is *scáthán*_N 'mirror' → *scáthánacht* _{VN} '(act of) reflecting'.

200 such items.[67] In the majority of cases, *-aíl* formations, including the ones displayed in (88) above, can be related to morphologically simplex nouns, which strongly suggests that again we have to do here with backformations.[68] It is because ÓD never provides inflected forms. Only constructions with light verbs seem to be available in finite contexts, e.g.

Lig sé glam orainn.	*osna a ligean*	*sceamh a ligean*
let out he bay on-us;	sigh PRT let out-VN	yelp PRT let out-VN
'He bellowed at us.'	'to sigh'	'to yelp, to squeal'

Let us start from those forms which can discharge the function of VNs. They follow two patterns. There are 10 items where the VN can only be related to a noun. If we examine their semantics we will see that they are products of the WFR (83), which produces event formations.

(89a)

V	N	VN	Nominalisation
*	tulca 'flood'	ag tulcaíl báistí 'pouring rain'	tulcaíl '(act of) flooding'
*	fead 'whistle'	Ní féidir le duine a bheith ag feadaíl agus ag ithe mine. 'A man can't whistle and drink at the same time.'	feadaíl '(act of) whistling'
*	bruach 'bank, brink'	ag bruachadaíl ar (imeacht, fhearthainn) 'on the verge of (departure, rain)'	
*	lapa 'paw, flipper'	ag lapadaíl san uisce 'splashing about in the water'	lapadaíl '(act of) paddling, splashing'
*	gearaíl 'restlessness'	bheith ag gearaíl 'to be restless'	

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[67] The discrepancy between the two sources is connected with the fact that Doyle and Gussmann list all possible variants. Thus, the same lexical item can be listed twice or even thrice, e.g. *puthaíl – puthadaíl*; *glugaíl – glugarnaíl*; *bíogaíl – bíogadaíl*; *srúmaíl – srúmataíl*. Wigger (1972: 211) suggests that forms in *-aíl* could be regarded as phonological variants of those in *-áil*. However, only about 20 *-aíl* formations in Doyle and Gussmann are listed as forms in *-áil* in ÓD. In addition to this, according to Doyle and Gussmann forms in *-aíl* function as variants of *-ach* (29 cases) and *-Vcht* (39 cases) VNs and nominalisations.

[68] There is also a handful of forms in *-aíl* which are related to adjectives, e.g. *broghach* 'dirty' – *broghaíl* 'dirt, filth', *catach* 'curly' – *cataíl* 'curliness', *lochtach* 'faulty' – *lochtaíl* 'faultiness'.

*	glór 'voice'	ag glóráil 'making sounds', gadhair ag glóráil 'dogs giving tongue'	glóráil 'sound of voices, vociferation'
*	srón 'nose'	ag srónaíl 'talking through the nose, snuffing'	srónaíl 'nasality, (act of) sniffing, inquisitiveness'
*	múr 'shower'	ag múráil 'showering'	múráil 'showery conditions, shovers'
*	fiataíl 'coarse grass, sedge'	ag fiataíl '(of animals) picking at coarse grasses, foraging'	
*	racht 'pent-up violent emotion, paroxysm'	Bhí said ag rachtaíl gháire. 'They were laughing loudly.'	rachtaíl 'venting of feelings, fits'
*	tocht 'deep emotion, stoppage'	ag tochtaíl goil 'weeping with stifled sobs'	tochtaíl 'suppressed sobbing'

In 3 cases apart from a noun there exists a verb with the same root. The denominal VNs can appear in the function of participles because they have a sightly different meaning than the verbs in the first column.

(89b)

V	N	VN	**Nominalisation**
amharc 'look, see' ag amharc uaim 'looking around me'	amharc 'sight, view'	ag amharcaíl oíche 'groping in the dark'	amharcaíl '(act of) peering, groping'
guthaigh 'voice, vocalise, sing' ag guthú 'voicing, singing'	guth 'voice'	Tá siad ag guthaíl ar a gcuid. 'They are calling to be fed.'	guthaíl '(act of) calling, voicing'
lúb 'loop, bend' ag lúbadh siar agus aniar 'bending backwards and forwards'	lúb 'loop, link, twist'	ag lúbarnaíl le pian 'writhing in agony'	lúbarnaíl '(act of) twisting, wriggling'

There are about 50 simplex nouns from which we can derive nominalisations with the semantics '(act of) V-ing'. We think that these nouns, in fact, give rise to imperfective verbs. We could repeat here the argument we applied to -V*cht* forms. The forms in (90a) correspond to those in (89a) above.

(90a)

V	N	VN	Nominalisation
*	déad 'tooth'	?	déadaíl '(act of) clenching the teeth, talking through one's teeth'
*	grág 'hoarse, raucous cry, caw, croak, bray'	?	grágaíl '(act of) cawing, croaking, braying'
*	puth 'puff, whiff'	?	puthaíl '(act of) puffing'
*	sciúg 'gasping, choking, hissing sound'	?	sciúgaíl '(act of) gasping for breath, choking, hissing'
*	smuga 'mucus, snot'	?	smugaíl '(act of) snotting'
*	triuch 'whooping cough'	?	triuchaíl '(act of) wooping, coughing convulsively'
*	caor 'glowing object'	?	caoraíl '(act of) glowing, blazing'
*	feam 'tail, stem, rod'	?	feamaíl '(act of) gadding, frisking'
*	braon 'drop'	?	braonaíl 'dripping drops'
*	gadhar '(hunting) dog'	?	gadhraíl '(act of) snarling, fighting (like dogs)'

In cases where an -*aíl* formation exists side by side with a verb based on the same root we may have to do with blocking. If the VN in -*aíl* would have the same meaning as the regular VN, we expect blocking. Otherwise, the -*aíl* form is a potential VN.

(90b)

V	N	VN in -aíl	Nominalisation
sioc 'freeze' ag sioc 'freezing'	sioc 'frost'	?	siocadaíl '(act of) shivering'
míog 'cheep' ag míogadh 'cheeping'	míog 'cheep, cry as of plover'	#	míogaíl (míogadaíl)'(act of) cheeping'
smeach 'flip, flick, click, gasp' ag smeachadh 'flipping, flicking'	smeach 'fillip, flip, click (of tongue)'	?[69]	smeachaíl '(act of) clicking of tongue, smacking lips; (act of) courting'
tonn 'billow, surge, gush' ag tonnadh 'pouring in waves'	tonn 'wave'	?	tonnaíl '(act of) rippling'

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[69] De Bhaldraithe (1985b) even lists *smeachaíl* as a VN:
Tá mé ag ceapadh go bhfuil J. ag smeachaíl léithí sin. 'I think that J. is courting her.'

bearnaigh 'breach, broach' ag bearnú 'breaching'	bearna 'gap'	?	bearnaíl '(act of) indenting'
gaothraigh 'fan, flutter' ag gaothrú 'fanning'	gaoth 'wind'	#	gaothraíl '(act of) fanning, waving, fluttering'
smut 'truncate, shorten' ag smutadh 'truncating'	smut 'stump, short piece, snout'	?	smutraíl '(act of) muttering'
bradaigh 'steal' ag bradú 'stealing, pilfering'	*	?[70]	bradaíl '(act of) stealing, pilfering, trespassing on crops'
sclog 'gasp, choke' ag sclogadh 'gasping, choking'	*	?[71]	sclogaíl '(act of) gasping, choking, chuckling'
corraigh 'move, stir' ag corraí 'moving'	*	#	corraíl 'agitation, stir, movement'
smiot 'hit, strike, smash' ag smiotadh 'striking'	*	#	smiotaíl '(act of) hitting, striking, smashing'

A large part of *-aíl* formations refer to sound events (cf. Wigger 1972: 211). 66 items in Gussmann and Doyle (1996) refer to the emission of sounds. However, we also find forms referring to different ways of talking, movement, work and other concepts.

5.3.7. Summary

In this section we began by analysing various forms in -V*cht*. The forms in (67a) have fully specified entries in the Permanent Lexicon. The forms in (67b) belong to the class of de-nominal VNs. We have argued for the existence of two WFRs deriving VNs (i.e. verbs which are inherently imperfective) directly from base nominals. The two rules (74) and (83) are similar to the transpositional rules attested in Polish which generate state and event formations respectively. We have devoted some space to the mechanisms regulating their usage. In some cases, the actual appearance of the potential VN is blocked because the Agent noun, which serves as its base, is itself a de-verbal formation. Blocking may also be effected if apart from a noun which serves as the base for the de-nominal VN

[70] We find *bheith ag bradaíl* 'trespassing' in Breatnach (1984: 54).

[71] We come across numerous exmples of VN usage in de Bhaldraithe (1985b), e.g. *ag sclugaíl gháirí* 'chuckling', *Bíonn an chearc ag sclugaíl* 'The hen is cackling'.

there exists a verb with the same root. The VN may surface if it is characterised by a different meaning from that of the parent verb. The blocking of the VN does not always preclude the appearance of corresponding nominalisations: (Verb) → (Agent) Noun → ?VN (which may be blocked) → Nominalisation.

Another interesting point is that aspect is a lexical category in Irish, and rules which generate imperfective verbs (N → VN) should be considered separately from rules which generate verbs unmarked for aspect. Hence the morpho-phonological modifications spelling them out are not part of the block of affixation rules spelling out the morphomic function F_{VN}. We identified four exponents, i.e. *-(e)acht*, *-íocht*, *-aíl* and zero.

6. Lexically marked items

6.1. $\varnothing / \varnothing^{-P}$

By far the most numerous group of VNs which have to be lexically marked are those which with respect to the corresponding verbal roots are either the same or undergo depalatalisation, e.g. *díol* 'sell' – *díol*; *cuir* 'put' – *cur*. There are about 101 such items in Ó Dónaill (1977). In our count we do not include literary or obsolete items such as for example *áil* 'request' – *áil*; *tafainn* 'hunt' – *tafann*, or derived forms based on the same root. As a rule, if a given root is morphologically irregular, in derived forms the lexically marked variant appears, e.g. *go – went*, *undergo – underwent* or *stand – stood*, *withstand – withstood*. The same holds for Irish, e.g.

scríobh 'write' – *scríobh*:   *coinscríobh* 'conscript' – *coinscríobh*,
                                       droimscríobh 'endorse' – *droimscríobh*,
                                       eiscríobh 'escribe' – *eiscríobh*,
                                       foscríobh 'subscribe' – *foscríobh*,
                                       inscríobh 'inscribe' – *inscríobh*,
                                       clóscríobh 'type' – *clóscríobh*

cuir 'put' – *cur*:   *iarchuir* 'postpone' – *iarchur*,
                                       idirchuir 'interpose' – *idirchur*,
                                       tarchuir 'remit' – *tarchur*

There is no feature on the basis of which one could predict which verbs belong to the category in which the VN equals the verbal root.

(91a)   **Verb**   **VN**
         achomharc [ɑχoːrk] 'appeal'   achomharc
         agóid [ɑgoːd´] 'object'   agóid
         aiseag- [aʃəg] 'restore'   aiseag
         aitheasc [ahəsk] 'address'   aitheasc
         aithris [ahər´əʃ] 'narrate'   aithris
         amharc [aurk] 'look'   amharc
         at [ɑt] 'swell'   at
         bladr- [blɑdər] 'cajole'   bladar
         braith [brɑh] 'perceive, feel'   brath
         bruíon [briːn] 'fight'   bruíon
         bruith [brih] 'boil'   bruith
         buain [buən´] 'reap'   buain
         cac [kɑk] 'void excrement'   cac
         casaoid [kɑsiːd´] 'complain'   casaoid
         ceangl- [k´aŋgəl] 'bind'   ceangal
         clíth [k´l´iːh] 'copulate'   clíth
         coimeád [komaːd´] 'maintain'   coimeád
         comhall- [koːl] 'fulfil'   comhall
         coimhéad [kov´eːd] 'guard'   coimhéad
         conspóid [konspoːd´] 'argue'   conspóid
         crith [krih] 'tremble'   crith
         cumasc- [kuməsk] 'mix'   cumasc
         dearmad [d´arəməd] 'overlook'   dearmad
         deimhneasc [d´ev´nəsk] 'aver'   deimhneasc
         diall [d´iəl] 'incline towards'   diall
         díol [d´iːl] 'sell'   díol
         díolaim [d´iːləm´] 'gather'   díolaim
         díon [d´iːn] 'protect'   díon
         diúl [d´uːl] 'suck'   diúl
         dord [doːrd] 'hum'   dord
         dréim [d´r´eːm´] 'climb'   dréim
         éag [eːg] 'die'   éag
         faichill [faχ´əl´] 'be careful of'   faichill
         faisnéis [faʃn´eːʃ] 'relate'   faisnéis
         fás [fɑːs] 'grow'   fás
         feighil [f´ail´] 'watch'   feighil
         fiach [f´iəχ] 'hunt'   fiach
         foghlaim [fauləm´] 'learn'   foghlaim

freastal- [fˊrˊastəl] 'attend'   freastal
frisnéis [fˊrˊiʃnˊeːʃ] 'refute'   frisnéis
gearán [gˊarɑːn] 'complain'   gearán
gogal- [gogəl] 'gobble'   gogal
goid [godˊ] 'steal'   goid
goin [gonˊ] 'wound'   goin
íoc [iːk] 'pay'   íoc
iomlasc- [imləsk] 'roll about'   iomlasc
iompr- [impər] 'carry'   iompar
lámhach [lɑːvəχ] 'shoot'   lámhach
leigheas [lˊais] 'heal'   leigheas
léim [lˊeːmˊ] 'jump'   léim
lorg [lorəg] 'track'   lorg
maoscl- [miːskəl] 'wade'   maoscal
meas [mˊas] 'estimate'   meas
meath [mˊah] 'decline'   meath
mún [muːn] 'urinate'   mún
ól [oːl] 'drink'   ól
reic [rekˊ] 'sell'   reic
riar [riər] 'administer'   riar
ríomh [riːv] 'count'   ríomh
rith [rih] 'run'   rith
rómhr- [roːvər] 'dig'   rómhar
scríobh [ʃkˊrˊiːv] 'write'   scríobh
seilg [ʃelˊəgˊ] 'hunt'   seilg
sioc [ʃik] 'freeze'   sioc
siúl- [ʃuːl] 'walk'   siúl
snámh [snɑːv] 'swim'   snámh
soláthr- [solɑːhər] 'gather'   soláthar
stad [stɑd] 'stop'   stad
taisteal- [taʃtˊəl] 'travel'   taisteal
tál [tɑːl] 'yield milk'   tál
teagasc [tˊagəsk] 'teach'   teagasc
teip [tˊepˊ] 'fail'   teip
tionól- [tˊinoːl] 'collect'   tionól
tnúth [tnuː] 'envy'   tnúth
tóch [toːχ] 'dig'   tóch
tochas- [toχəs] 'scratch'   tochas
tonach [tonəχ] 'wash'   tonach
tost [tost] 'become silent'   tost

trácht [trɑːχt] 'discuss'	trácht
triail [tˊrˊiəlˊ] 'try'	triail
triall [tˊrˊiəl] 'travel'	triall
triosc [tˊrˊisk] 'interrupt'	triosc
troid [trodˊ] 'fight'	troid
tuar [tuər] 'augur'	tuar
tuar [tuər] 'bleach'	tuar
usáid [uːsɑːdˊ] 'use'	usáid

Verbal nouns formed by depalatalising the verbal base must also be lexically marked.

(91b)   **Verb**   **VN**

coir [korˊ] 'tire'	cor [kor]
coisc [koʃk] 'stop'	cosc [kosk]
comhraic [koːrəkˊ] 'encounter, fight'	comhrac [koːrək]
cuir [kirˊ] 'put'	cur [kur]
cuntais [kuntəʃ] 'count'	cuntas [kuntəs]
doir [dorˊ] 'bull'	dor [dor]
goil [golˊ] 'cry'	gol [gol]
loit [lotˊ] 'hurt'	lot [lot]
scoir [skorˊ] 'unyoke'	scor [skor]
súraic [suːrəkˊ] 'suck'	súrac [suːrək]
tacair [tɑkərˊ] 'glean'	tacar [tɑkər]
tochrais [toχrəʃ] 'wind'	tochras [toχrəs]
toirmisc [torˊəmˊəʃkˊ] 'prohibit'	toirmeasc [torˊəmˊəsk]
tomhais [toːʃ] 'measure'	tomhas [toːs]

As we have already said, if we treat the VNs in (91) as based on verbs, firstly we cannot pin down any feature which would be responsible for the lack of any morphophonological modification, and secondly we have no means of accounting why in certain cases we observe depalatalisation. Furthermore, we cannot speak of a zero morpheme which causes depalatalisation. Zero and 'depalatalising zero' do not seem to be in complementary distribution so they cannot be variants of one morpheme. We have here two classes of verbal roots, which are lexically marked.

Historically, some of the verbs in (91b) result from N → V derivation/ conversion. Ó Cuív (1958: 153-157) discusses verbs whose 3rd person sg. past form is formed from the VN by palatalising the final consonant, i.e.:

VN {-C^{w}} → past {-C^{y}}

He enumerates the following verbs which fit into that scheme, i.e. verbs which belong historically to denominative verbs formed from abstract nouns, e.g.

Abstract Noun		**Verb**
cur 'put-VN'	→	*do chuir* 'PRT put 3rd sg. past'
gol 'cry-VN'	→	*do ghoil* 'PRT cry 3rd sg. past'
lot 'hurt-VN'	→	*do loit* 'PRT hurt 3rd sg. past'
scur 'unyoke-VN'	→	*do scuir* 'PRT unyoke 3rd sg. past'

Some verbs retained the palatalised consonant in finite inflection, some others did not. Whether the process of N → V derivation mentioned by Ó Cuív is of any relevance in synchronic terms is a different kettle of fish. Some of the verbs in (91) are indeed derived from nouns, but in many cases it is the verb that is the primary member in the conversion pair so we cannot lump all these forms together. Theoretically, it might be possible to establish the direction of derivation.[72] For example, let us consider the form *leigheas*. There are two entries in the dictionary, one for a noun and one for a verb. While the verb means 'heal, cure, remedy', the semantic range of the noun is wider as it means 'art of healing (medicine), treatment, cure'. As for derivatives, the denominal

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[72] A number of procedures have been devised in synchronic studies to disentangle the problem of the direction of derivation in N → V; V → N conversion pairs. A resumé can be found in Cetnarowska (1993: 24-39). Among other things we have to consider semantic patterns. As far as the V → N conversion is concerned, nominalisations may denote a process, state, condition, single instance of V-ing or being V-ed. Among the non-actional readings the result and object of V-ing predominate, though the amount V-ed or the one who V-s also feature among the possible readings. We need to take into consideration the semantic range of both forms. A zero derivative usually acquires a more specific meaning, whereas the primary member may exhibit other senses which are not reflected in the corresponding derivative. In addition to this, we need to analyse restrictions of usage. The primary member is commonly used, whereas the derivative may have an incomplete inflectional paradigm, e.g. the verb *neighbour* occurs mainly in the *-ing* form. Derivational relations may also contribute to solving our problem, as the primary member 'may serve more readily as an input to affixation processes'. Finally, lexemes with irregular inflectional paradigms should be regarded as non-derived. We will opt for the direction man$_N$ → man$_V$ or fish$_N$ → fish$_V$ because the nouns involved have irregular plurals. The opposite direction will be assumed in drink$_V$ → drink$_N$ or hit$_V$ → hit$_N$, because the verbs belong to the group of strong ones.

forms *leigheasach* 'healing, curative'[73] and *leigheasra* 'cures, medicines' are attested. We may say that *leigheas* belongs to the group of denominal verbs, because the sematic range of the noun is wider and it serves more readily as an input to affixation. There is no room for doubt in the case of *scríobh*. The verb has more meanings than the noun: 'write, fill in, compose' vs. '(hand)writing'. There is only one deverbal derivative – *scríobhaí* 'scribe'. The verb *coimhéad* means 'watch over, guard, attend to, mind, look out for, follow observantly'. The nominal meanings are closely connected: 'watch, guard, watching, observation'. As we have two derivatives, one denominal, one deverbal – *coimhéadach* 'watchful, vigilant, observant', *coimhéadaí* 'watcher, observer', the criterion of semantic dependence will tip the scales in favour of regaring the verb as primary. By and large, it is very difficult to adjudicate which entity serves as the base, which may in consequence lead to arbitrary choices.

Even if we were able to specify which nouns are subject to the rule of N → V, and consequently to say that the VNs of denominal verbs [N]$_V$ where no stem-forming element is involved are identical to N, our findings would be of no significance as far as our productive synchronic affixation rules forming VNs are concerned. VNs from (91) formed without any morphophonological modification with respect to their verbal bases have a different status in the language from the forms described in section 4. and 5. above. The affixation rules discussed in the preceding sections can be likened to English *-ing*, which attaches regularly to a specified set of bases. The Irish affixes discussed in this section are like English *-ment, -(a)tion, -ance, -al* etc., which means that they are not used productively and new forms can only arise as the result of analogy (cf. Malicka-Kleparska 1988: 103-104). Therefore, the regularity concerning the formation of VNs of certain denominal verbs has only the status of a redundancy statement, i.e. it establishes a link in the lexicon between two classes of forms which are formally or semantically related (Jackendoff 1972).

We need to bear in mind that there is another sizeable group of denominal VNs which arise by means of no morphophonological modification. However, they result form a different WFR which generates imperfective verbs, i.e. N → VN. This will include the items from table (86) in 5.3. There are some more examples below:

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[73] The suffix *-ach* is added to nouns to form adjectives, e.g. *peaca* 'sin' – *peacach* 'sinful', *cineál* 'kind, species' – *cineálach* 'generic', *giorac* 'noise' – *gioracach* 'noisy', *eagla* 'fear' – *eaglach* 'apprehensive'.

(92)

N	VN
fearthainn 'rain'	ag fearthainn 'raining'
báisteach 'rain'	ag báisteach 'raining'
obair 'work'	ag obair 'working'
suairceas 'pleasantness, gaiety'	ag suairceas 'passing the time pleasantly, having fun'
saothar 'work, labour, toil'	ag saothar 'labouring, toiling'
amaidí 'folly' (<amaideach 'foolish')	ag amaidí (le) 'fooling, playacting with'
dordán 'deep sound, hum, buzz'	ag dordán 'humming, buzzing, murmuring'
tónán '(act of) moving on one's bottom'	ag tónán thart 'moving clumsily about'
fochaid 'mocking, derision'	ag fochaid ar/faoi 'mocking, ridiculing'
sodar '(act of) trotting, trot'	ag sodar i ndiaidh duine 'trotting after sb'
gnó 'business'	ag obair is ag gnó 'working hard'

These verbs are different from the pairs in (91) insofar as they are confined to the progressive aspect and they never occur with finite inflection, i.e. *fearthainneann* or *báistíonn*.[74] In other words, they are more like *-Vcht* VNs.

6.2. *-ach [əχ]*

Another set of forms which has to be lexically marked comprises some first (93a) and second conjugation verbs (93b), which instead of forming their VNs by means of *-(e)adh* or *-ú* employ the formative *-ach* [əχ]. It is impossible to predict which verbs undergo this process.

(93)

a. **Verb**   **VN**
    aitim [atʹimʹ] 'beseech, used only in 1st sg. ind.'   atach [atəχ]
    cnead [kʹnʹad] 'pant'   cneadach [kʹnʹadəχ]
    iasc [iəsk] 'fish'   iascach [iəskəχ]
    scréach [ʃkʹɾʹeːχ] 'screech'   scréachach [ʃkʹɾʹeːχəχ]
    scread [ʃkʹɾʹad] 'scream'   screadach [ʃkʹɾʹadəχ]

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[74] ÓD gives a verbal entry *báistigh*, but I know of no examples of finite forms.

b.   **Verb**   **VN**

amhastraigh [austrəgʹ] 'bark'	amhastrach [austrəχ]
aslaigh [asləgʹ] 'induce'	aslach [asləχ]
baslaigh [basləgʹ] 'baste'	baslach [basləχ]
ceannaigh [kʹanəgʹ] 'purchase'	ceannach [kʹanəχ]
clúdaigh [kluːdəgʹ] 'cover'	clúdach [kluːdəχ]
cnuasaigh [knuːsəgʹ] 'pick'	cnuasach [knuːsəχ]
crústaigh [kruːstəgʹ] 'pelt'	crústach [kruːstəχ]
cuardaigh [kuərdəgʹ] 'search'	cuardach [kuərdəχ]
cumhdaigh [kuːdəgʹ] 'cover'	cumhdach [kuːdəχ]
díoscarnaigh [diːskɑrnəgʹ] 'creak'	díoscarnach [diːskɑrnəχ]
éagnaigh [eːgnəgʹ] 'moan'	éagnach [eːgnəχ]
eitigh [etʹəgʹ] 'refuse'	eiteach [etəχ]
fuirigh [firʹəgʹ] 'hold back'	fuireach [firʹəχ]
fuadaigh [fuədəgʹ] 'abduct'	fuadach [fuədəχ]
glaoigh [gliːgʹ] 'call'	glaoch [gliːχ]
réitigh [reːtʹəgʹ] 'level'	réiteach [reːtʹəχ]
taifigh [tafʹəgʹ] 'analyse'	taifeach [tafʹəχ]
toibhigh [tovʹəgʹ] 'levy'	tobhach [tauχ]

There are some miscellaneous items which seem to contain this suffix and may function as a VN, while the corresponding finite verb is not possible.

V	N	VN
*	brionglóid 'dream'	ag brionglóideach 'dreaming'
*	pramsa 'prance'	ag pramsach ar fud an tí 'prancing, romping all over the house'
blasaigh_V – blasacht _{VN} 'taste'	(D) blasacht 'act of tasting'	ag blasachtach ar bia 'testing food on lips' ag blasachtach ar an im 'nibbling at the butter'
clagar – clagadh 'clack, clatter, pelt'	clagadh '(act of) clacking, clattering, pelting'	ag clagarnach ar an díon 'clattering, pattering on the roof'

6.3. -an [ən]

1st conjugation disyllabic verbs whose roots end in the sequence ə + velar stop (k, g), form the VN by means of [ən], and have to be listed in the lexicon.

(94a)

Verb	Ind. present	VN
coisreac-/ coisric- 'consecrate'	**coisreac**ann/coisriceann	coisreacan
[koʃr´ək´]	[koʃr´əkən]	[koʃr´əkən]
tionlac- 'escort'	**tionlac**ann	tionlacan
[t´inlək]	[t´inləkən]	[t´inləkən]
teasarg- 'rescue'	**teasarg**ann	teasargan
[t´asərg]	[t´asərgən]	[t´asərgən]
urlac- 'vomit'	**urlac**ann	urlacan
[uːrlək]	[uːrləkən]	[uːrləkən]

The forms above are exceptional, as normally first conjugation verbs ending in this sequence take the ending *-(e)adh* (cf. table (14) in section 4.1.):

(94b)

diúrac- 'cast'	diúracann	diúracadh
adhlac- 'bury'	adhlacann	adhlacadh
tíolac- 'bestow'	tíolacann	tíolacadh

Also various other monosyllabic and disyllabic verbs ending in [g] and [g´], which take [ən] to form the corresponding VN, have to be listed. Regular formations such as *bolg* 'bulge' – *bolgadh*, *cailg* 'bite' – *cailgeadh*, end in *-(e)adh*.

(95)

Verb	VN	
leag [l´ag] 'knock down'	leagan [l´agən]	leagadh
teilg [t´el´əg´] 'cast'	teilgean [t´el´əg´ən]	
tréig [t´r´eːg´] 'abandon'	tréigean [t´r´eːg´ən]	

Summing up, we can say that this suffix is added to various verbs belonging to the first conjugation which terminate in velar plosives [g´ g k´ k].

6.4. -chan [əχən]

Another group of verbs which has to be lexically marked are those which form their VN by means of the suffix *-chan*.

(96)

Verb	VN	VN (variant)
athnuaigh [ɑ ˈnuəgʹ] 'renovate'	athnuachan [ɑ ˈnuəχən]	
beoigh [bʹoːgʹ] 'animate'	beochan [bʹoːχən]	beoú [bʹoːuː]
buaigh [buəgʹ] 'win'	buachan [buəχən]	buadhadh [buə]
buígh [biːgʹ] 'yellow'	buíochan [biː(ə)χən]	buíú [biːuː]
cruaigh [kruəgʹ] 'harden'	cruachan [kruəχən]	cruadhú [kruəuː]
ruaigh [ruəgʹ] 'redden'	ruachan [ruəχən]	
tiubhaigh [tʹuvəgʹ] 'thicken'	tiúchan [tʹuːχən]	tiúbhú [tʹuːvuː]
dubhaigh [duvəgʹ] 'blacken'	dúchan [duːχən]	dubhú [duvuː]
láigh [lɑːgʹ] 'dawn' lánn sé	láchan [lɑːχən]	
righ [rigʹ] 'stretch' ríonn sé	ríchan [riːχən]	

The majority of verbal nouns in *-chan* are derived from verbs which in turn have been derived from adjectives, e.g. *nua* 'new' → *athnuaigh* 'make new again, renovate',[75] *beo* 'alive' → *beoigh* 'make alive, animate', *cruaidh* 'hard' → *cruaigh* 'make hard, harden', *tiubh* 'thick' → *tiubhaigh* 'make thick, thicken', *dubh* 'black' → *dubhaigh* 'make black, blacken'. There are two derivational patterns. If the verbs in question belong to the 2nd conjugation (cf. section 5.2. and the derivational rule in (61) which generates second conjugation verbs from adjectives), they take the expected *-ú* ending added to the root. The roots of some of the verbs in (96) end in a long vowel or diphthong, e.g. *beo-* [bʹoː] or *crua-* [kruə], and the application of this affixation rule results in a sequence of two long vowels word-finally, a sequence which does not violate the phonotactic constraints of Irish, e.g. *beochan, beoú* or *cruachan, cruadhú*. We have to do with lexical markig when these verbs are regarded as 1st conjugation verbs.[76]

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[75] *ath-* is a fairly productive prefix which can be likened to English *re-*.

[76] The verbs in (96) are exceptional because even though they are morphologically complex they belong to the first conjugation. As their roots terminate in either a long vowel or diphthong the VN should equal the root, as in for example *crúigh* 'milk' – *crú*. Then the VN would be equivalent to the base adjective or noun. To avoid such ambiguity the affix *-chan* is attached to the root.

6.5. -(a)int [ənˊtˊ]

There is a group of verbs which form their VN by means of the suffix *-int*
[ənˊtˊ], however it is impossible to predict which verbs are subject to this rule.
Their only common feature is that they terminate in a radical velar consonant [χ
g gˊ k]. Some of them involve an allomorphic change, i.e. final consonant k, g >
ʃk before the attachment of the suffix. These items have to be fully specified in
the Permanent Lexicon.

(97) **Verb**   **VN**   **Older form of VN**
     féach ar [fˊeχ] 'look'   féachaint [fˊeχənˊtˊ]   féachain
     lig [lˊigˊ] 'let'   ligint [lˊigˊənˊtˊ]   ligean
     fág [fɑːg] 'leave'   fágaint [fɑːgənˊtˊ]
     tóg [toːg] 'build'   tógaint [toːgənˊtˊ]

                                       k, g > ʃk
     feic [fˊekˊ] 'look'   feiscint [fˊeʃkˊənˊtˊ]   feicsin
     tuig [tigˊ] 'understand'   tuiscint [tiʃkˊənˊtˊ]   tuigsin
     tairg [tarˊəgˊ] 'offer'   tairiscint [tarˊəʃkˊənˊtˊ]   tairgsin

It will be noted that we have to do with monosyllabic and disyllabic verbs
terminating in a velar consonant. The specification of the base is exactly the
same as for the [ən] suffix. Is this a coincidence? We could regard the two as
closely related if we had a means of accounting for the final consonant in *-(a)int*.
Hickey (1985: 217) notes that there is a tendency in Irish 'to develop a voiceless
alveolar stop after certain continuant segments'. This tendency manifests itself,
among other things, in the form of an epenthetic consonant in *arís* [əˈriːʃt]
'again'. We may have to do here with a lexicalised phonological development.
This idea finds some support in the older forms of the VNs in question.

6.6. -úint [uːnˊtˊ]

Some verbs form corresponding VNs by means of the suffix *-úint*. All that can
be said about these verbs is that their roots end in a (palatalised) alveolar
consonant. The verbs in question also have to be listed.

(98)   **Verb**   **VN**
       creid [kˊrˊedˊ] 'believe'   creidiúint [kˊrˊedˊuːnˊtˊ]
       feil [fˊelˊ] 'suit'   feiliúint [fˊelˊuːnˊtˊ]
       gin [gˊinˊ] 'give birth'   giniúint [gˊinˊuːnˊtˊ]

lean [lʹan] 'follow' leanúint [lʹanuːnʹtʹ]
oil [olʹ] 'nourish' oiliúint [olʹuːnʹtʹ]
oir [orʹ] 'suit' oiriúint [orʹuːnʹtʹ]
eisigh [eʃəgʹ] 'issue' eisiúint [eʃuːnʹtʹ]
glinnigh [gʹlʹinʹəgʹ] 'scrutinise' glinniúint [gʹlʹinʹuːnʹtʹ]

6.7. -(e)amh [əv]

We have to resort to lexical marking in case of first and second conjugation verbs (99a and b respectively) which form their VNs by means of the suffix *-(e)amh*.

(99) **Verb** VN
a. agall- [ɑgəl] 'converse' agallamh [ɑgələv]
 buair [buərʹ] 'grieve buaireamh [buərʹəv]
 caith [kɑh] 'wear' caitheamh [kɑhəv]
 comhair [koːrʹ] 'calculate' comhaireamh [koːrʹəv]
 déan [deːn] 'do' déanamh [deːnəv]
 maith [mɑh] 'forgive' maitheamh [mɑhəv]
 seas [ʃas] 'stand' seasamh [ʃasəv]
 tuill [tilʹ] 'earn' tuilleamh [tilʹəv]
 éigh [eːgʹ] 'cry, scream' éamh [eːv]
 fón- [foːn] 'serve' fónamh [foːnəv]
 iaigh [iəgʹ] 'close' iamh [iəv]
 léigh [lʹeːgʹ] 'read' léamh [lʹeːv]
 maígh [miːgʹ] 'declare' maíomh [miːvʹ]
 téigh [tʹeːgʹ] 'heat' téamh [tʹeːvʹ]

b. **áir**igh [ɑːrʹəgʹ] 'count' áireamh [ɑːrʹəv]
 áitigh [ɑːtʹəgʹ] 'settle' áiteamh [ɑːtʹəv]
 ascn- [askən] 'travel' ascnamh [askənəv]
 cásaigh [kɑːsəgʹ] 'lament' cásamh [kɑːsəv]
 caidrigh [kadʹrʹəgʹ] 'be on friendly terms with' caidreamh [kadʹrʹəv]
 cuimhnigh [kivʹnʹəgʹ] 'remember' cuimhneamh [kivʹnʹəv]
 cúisigh [kuːʃəgʹ] 'accuse' cúiseamh [kuːʃəv]
 cúitigh [kuːtʹəgʹ] 'requite' cúiteamh [kuːtʹəv]
 cúnaigh [kuːnəgʹ] 'help' cúnamh [kuːnəv]
 dealraigh [dʹalrəgʹ] 'shine' dealramh [dʹalrəv]
 éiligh [eːlʹəgʹ] 'claim' éileamh [eːlʹəv]
 foighnigh [fainʹəgʹ] 'have patience' foighneamh [fainʹəv]

fuaidrigh [fuəd´r´əg´] 'stray'	fuaidreamh [fuəd´r´əv]
iomar- [imər] 'row'	iomramh [imərəv]
machnaigh [mɑχnəg´] 'think'	machnamh [mɑχnəv]
sásaigh [sɑːsəg´] 'satisfy'	sásamh [sɑːsəv]
smaoinigh [smiːn´əg´] 'think'	smaoineamh [smiːn´əv]
taibhrigh [tav´r´əg´] 'dream'	taibhreamh [tav´r´əv]
táinsigh [tɑːn´ʃəg´] 'reproach'	táinseamh [tɑːn´ʃəv]
taitn- [tat´ən´] 'shine'	taitneamh [tat´n´əv]
téarnaigh [t´eːrnəg´] 'escape'	téarnamh [t´eːrnəv]
tionscn-[t´inskən] 'begin'	tionscamh [t´insknəv]
tórraigh [toːrəg´] 'hold obsequies of'	tórramh [toːrəv]

All in all, there are about 40 items marked for this suffix. As usual we do not include compounds or derived verbs containing the same roots, e.g.
cúisigh 'accuse'– *cúiseamh* / *ionchúisigh* 'prosecute' – *ionchúiseamh*
comhair 'calculate' – *comhaireamh* / *athchomhair* 'recount' – *athchomhaireamh*
téigh 'heat' – *téamh* / *atéigh* 'reheat' – *atéamh*.

6.8. Other exponents

In this section we present suffixes which are limited in occurrence and frequently put together under the common heading 'odd ones'. The VN forms in question are completely irregular unpredictable formations.

(100)

	Verb	**VN**
a.	***-m [əm´]***.	
	druid [drid´] 'close'	druidim [drid´əm´]
	gair [gar´] 'call'	gairm [gar´əm´]
	seinn [ʃen´] 'play'	seinm [ʃen´əm´]
	tit [t´it´] 'fall'	titim [t´it´əm´]
b.	***-táil [dɑːl´]***	
	féach le [f´eːχ] 'make an attempt'	féachtáil [f´eːχdɑːl´]
c.	***-(e)achtáil [əχdɑːl´]***	
	mair [mar´] 'live'	maireachtáil [mar´əχdɑːl´]
	féad [f´eːd] 'be able to'	féadachtáil [f´eːdəχdɑːl´]
	airigh [ar´əg´] 'perceive'	aireachtáil [ar´əχdɑːl´]

d.   ***-achtain [əχtan´]***
      dámh [dɑːv] 'concede'   dámhachtain [dɑːvəχtan´]
      mainnigh [man´əg´] 'default'   mainneachtain [man´əχtan´]

e.   ***-aidh [ɪg´]***
      iarr [iər] 'ask, try'   iarraidh [iərɪg´]

f.   ***Irregular/suppletive***
      ainic [an´ək´] 'protect'   anacal [an´ək´əl]
      beir [b´er´] 'catch'   breith [b´r´eh]
      bí [b´iː] 'be'   bheith [veh]
      deir [d´er´] 'say'   rá [rɑː]
      tag [tɑg] 'come'   teacht [t´aχt]
      té- [t´eː] 'go'   dul [duɫ]

7. Summary

Abstract grammatical relations responsible for the formation of infinitives, participles and nominalisations are mapped onto a morphomic function F_{VN}, which erases the distinction between them at the surface level. This is a discontinuous morphophonological function which means that it does not have a unique morphological marker. In this section we present and discuss the set of realisation rules which spell it out.

The problem with Irish is that there are only semi-native speakers left, the majority of whom have lost the ability to create new words. We base our generalisations on a limited corpus, i.e. ÓD, which contains forms taken from a variety of dialects, old (obsolete) forms and neologisms coined by non-native speakers.[77] In circumstances like this, it is difficult to talk about competing forms and productivity. Therefore, even though the proposed affixation rules

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[77] Apart from the limited character of our data (ÓD is nowhere near as comprehensive as its English counterpart – the OED), we need to bear in mind the methodological problems which arise when we use dictionaries as a source of data. Advantages and disadvantages of using dictionaries as data bases for productivity studies are discussed for example in Bauer (1992) and Plag (1999: 97-100). Our research is additionally hampered by the fact that no large corpora are available for Irish, i.e. corpora comparable to the Cobuild corpus of about eighteen million English word-tokens (based at Birmingham University and used by the dictionary publisher Collins). Such corpora are invaluable when it comes to assessing the number of neologisms and hapax legomena.

aim to describe accurately the existing state of affairs, their status in the language is difficult to adjudicate.

Affixation rules can be divided into productive and unproductive. Affixation rules are normally productive in the sense that they reflect the competence of the native speaker and 'can be used in the production of new forms in the language' (Bauer 1988: 57). This question is interlocked with the contents and structure of the lexicon which is conceived of as two interacting lists – a list of actual words which may be idiosyncratic (the Permanent Lexicon) and a list of potential words which are morphologically regular. This structuring finds support in psycholinguistic studies (e.g. Caramazza *et al.* 1988) where morphologically complex words (products of both derivation and inflection) are either listed and accessed directly or generated – formed 'on-line'. The first root of access is utilised in the case of high frequency, opaque forms with unproductive suffixes whereas the second for transparent, low frequency words. Complex forms that are stored as wholes (entered directly in the Permanent Lexicon) are still analysed by redundancy rules which express their relatedness with respect to verbs but without claiming that they are synchronically derived from base verbs. Gussmann (1987: 91) proposes that 'affixation rules should list or enumerate affixes which only function in redundancy statements without specifying any distributional characteristics. (…) this absence of environment in the structural description of the rule merely reflects the fact that no such environment can be formulated.'

The total number of such lexically marked items in the case of Irish VNs approximates 267. Despite a fairly large number of exceptions, we need to bear in mind that the regular rules account for hundreds of forms. Therefore, the process of VN formation can hardly be viewed as irregular or unpredictable. It is no more irregular than the formation of the plural or past tense in English. The table below displays exceptions, i.e. cases in which the distribution of an affix is conditioned by lexical marking.

(101)

Exponent	Verb – VN example	Number of items
Ø	díol 'sell' – díol	87
-(e)amh [əv]	caith 'spend' – caitheamh seas 'stand' – seasamh	37
-ach [əχ]	ceannaigh 'buy '– ceannach	24
-í [iː]	cónaigh 'dwell'– cónaí nigh 'wash'– ní	14 8
Ø$^{-P}$	cuir 'put' – cur	14
-t [tʹ]	bain 'cut' – baint tiomáin 'drive'– tiomáint	10
-chan [χən] Class 1	beoigh 'animate' – beochan	10
-úint [uːnʹtʹ]	creid 'believe' – creidiúint	8
-áil [ɑːlʹ]	faigh 'get' – fáil	7
-(e)an [ən]	leag 'knock down' – leagan	7
-int [ənʹtʹ]	féach 'look' – féachaint	7
-acht [əχt]	fan 'wait' – fanacht	7
-adh [ə $^{-P}$]	buail 'hit' – bualadh	6
-adh [ə] Class 2	leadair 'smite' – leadradh	4
-im [əmʹ]	tit 'fall' – titim	4
-achtáil [əχdɑːlʹ]	mair 'live' – maireachtáil	3
-aíl [iːlʹ]	glam 'bark' – glamaíl	3
-táil [dɑːlʹ]	féach le 'make an attempt' – féachtáil	1
-aidh [ɪgʹ]	iarr 'ask' – iarraidh	1
irregular	deir 'say' – rá	5

Let us now turn to productive rules of affixation. The affixation rules involved are sensitive to certain phonetic characteristics of the verbal root, and additionally respond to the lexical information provided by the verbal base, namely the conjugation marker. The rules are disjunctively ordered, i.e. applying in the order from the most specific to the most general (cf. Szymanek 1985: 131-165).

In accordance with the Paninian principle the first to apply are the palatalisation rule (4.3.), the rule appending *-t* (5.1.1.) and the rule which implements no morphophonological modification (4.2.). These rules are not ordered because their specifications are mutually exclusive, i.e. each rule operates on a uniquely specified set of bases.

The rule of palatalisation operates on verbal roots which terminate in the phonetic string [ɑːl].[78] No information about the number of syllables or verb class is necessary. It is worth noting that the only new verbs that enter the language are borrowings formed by means of the verbalising suffix [ɑːl].

$$\exists\, Z : Z = [[X] + \varnothing^{P}\,] \quad \text{if} \quad [X]_{[V]} = [Y\alpha\text{ːl}] \qquad\qquad \text{e.g.} \quad \text{bácáil, lódáil}$$

The rule of -*t* affixation reads as follows:

$$\exists\, Z : Z = [[X] + t\acute{}\,] \quad \text{if}\; [X]_{[V,\, \text{disyllabic}]} = [Y\, \partial C_{[+\, \text{sonorant}]}]$$

    e.g. eitilt
    e.g. mungailt
    e.g. aifirt
    e.g. freagairt
    e.g. aithint
    e.g. cogaint
    e.g. fulaingt

The information about the verb class is redundant as there are no disyllabic first conjugation verbs ending in sonorants preceded by an unstressed vowel.

Verbal roots which terminate in a long vowel or diphthong undergo no change:

$$\exists\, Z : Z = [[X] + \varnothing] \quad \text{if}\; [X]_{[V,\, \text{monosyllabic -VV}]} \qquad\qquad \text{e.g.} \quad \text{crú}$$

Again no information concerning the verb class is necessary.

There are two affixation rules which account for the default representation. They do not compete because the specification of bases on which they operate is distinct. It hinges on the verb class to which the verbal root belongs.

The elsewhere case for 1st conjugation verbs is the rule which attaches an unstressed vowel to the root (4.1.):

$$\exists\, Z : Z = [[X] + \partial] \quad \text{if} \quad [X]_{[V\, \text{Class 1}]}$$

    e.g. glanadh
           ithe
    e.g. adhlacadh

The general specification of the base in the affixation rule above subsumes verbal roots which are predominantly monosyllabic, and also disyllabic ones

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[78] ∃ there is such a Z (standing for a word form) that Z consists of a basic form, i.e. the verbal root X + suffix / other morphophonological exponent.

terminating in [k ɡ d r]. It is not applicable to monosyllabic verbs which end in -*igh*, as we have demonstrated that the long vowel in the VN is not a phonological reflex of -ə attachment.

The elsewhere case for verbs belonging to the second conjugation is the rule adding [uː] to the verbal root (5.2.). It does not matter whether the verb in question is de-nominal, de-adjectival or morphologically simplex, which means that the rules of affixation require no access to the previous category of the stem.

$$\exists \, Z : Z = [[X] + uː] \quad \text{if} \quad [X]_{[V \text{ Class 2}]}$$

<div align="right">

e.g. maslú
e.g. fuarú
e.g. bailiú

</div>

The affixation rules in the first block depend solely on phonological properties of the base word, whereas the affixation rules in the second block make reference to class membership which is lexically determined. The affixation rules put forward for the rule deriving de-adjectival verbs in Gussmann (1987) also make reference to phonological properties of the base (e.g. -*en* attaches to monosyllabic adjectives ending in a non-nasal sonorant) and the lexical feature + Latinate. This state of affairs is to be expected. When the spelling operations are applied they have access only to the phonological base and its lexical features.

The affixation rules above are not ordered with respect to or connected in any way with the rule of -V*cht* affixation (71). This affixation rule spells out different morphological operations, i.e. the ones which form imperfective verbs directly from nominal bases. It is a unique morphological marker of the rule deriving VNs from Agents. Thus an abstract derivational relationship $N_{AGENT} \rightarrow$ VN is realised by means of the affixation rule below:

$\exists \, Z: Z = [[X] + (e)acht]$	if X = [Yóir]	e.g. turasóireacht
/there is such/	if X = [Yaire]	e.g. diúgaireacht
	if X = [Yéir]	e.g. tincéireacht
	if X = [Yán]	e.g. streancánacht
	if X = [Yoir]	e.g. doirseoireacht
	if X = [Yúir]	e.g. dochtúireacht
	if X = [Yach]	e.g. graostacht
	if X = [Yín]	e.g. maistíneacht
	if X = [Yóg]	e.g. stárógacht
	if X = [Yaí]	e.g. scéalaíocht
	in marked items	e.g. sagartacht

Whether the rule $N_{AGENT} \rightarrow VN$ is distinct from or part of a more general process deriving VNs from nouns is a question we leave open. Apart from *-(e)acht* this more general relationship seems to be realised by a variety of exponents, *-íocht*, *-aíl* and Ø. This is a very interesting issue which needs to be investigated further.

Conclusion

Despite efforts made by various linguists Irish morphology (especially word-formation) remains in many respects an uncharted area. The studies available (with notable exceptions) are often fragmentary or underdeveloped. This work was meant to amend this situation slightly, as the author set herself the goal of carrying out an exhaustive survey of verbal nouns in Modern Irish. This section summarises the most important issues which arose in our study, though we are aware of the fact that many topics deserve a fuller treatment than was accorded here.

Traditionally, morphology is conceived of as bifurcated into inflection and derivation. At first glance it is not evident which domain verbal nouns in Irish should fall into. It has been argued that syncretism/neutralisation/homonymy in morphology can be successfully handled only if we divorce the grammatical and formal side of morphology, which is the basic assumption of the LMBM framework adopted in this study. A careful examination of syntactic contexts featuring VNs and their morphological properties made it possible to distinguish four categories: two inflectional – the infinitive and present participle, and two derivational – actional and concrete nominalisations. In the light of our findings, inflection and derivation should no longer be viewed as opposite poles in a continuum separated by a huge indistinct area in between. Once we adopt the Separation Hypothesis we are able to draw precise dividing lines. VNs in the progressive construction, which seemed a hybrid category, were shown to be inflectional. They cannot be a derivational category because the lexicon cannot create syntactic structure, and because the genitive case of the NP complement is an instance of verbal government. Separation of the formal and grammatical aspect made it possible to reanalyse the so-called genitive of the VN as a positional variant of the present participle. This conclusion results from the fact that the form in question is formed from verbal bases, it is almost always followed by an object NP like a verb in a corresponding clause, it has an equivalent construction with an infinitive, and it does not behave like an ordinary noun when modified by another noun phrase.

Our findings seem to corroborate Kuryłowicz's idea that there exists a parallel between certain inflectional and derivational categories, namely, between inherent inflectional categories, i.e. those that are not syntactically engaged and which encode grammatical aspects of meaning, and transpositions – products of derivational processes whose sole function is grammatical category

shift. It was encouraging to discover that they are subject to similar restrictions on productivity. It is often assumed that semantic limitations do not play a role in inflectional processes. We have noted that there may be systematic gaps in the paradigms due to semantics. In our case stative verbs are excluded from participle formation, whereas certain de-nominal verbs (e.g. those referring to work, communication, slow movement) are inherently imperfective, i.e. are confined to the progressive form. Such verbs more readily serve as bases for the derivation of regular (uncountable) nominalisations.

We can also observe that there is an interesting interaction between morphophonological marking and syntax. Different VN categories that coalesce on the surface can only be disambiguated by the syntactic context. We advocate Aronoff's (1994) proposal for recognising a purley morphological level – the morphomic level – which maps morphosyntactic representations onto their phonological manifestation. This is necessary not only in the case of VNs, but also in the case of adjectival participles and genitives of nominalisations which terminate in *-ta/te* and *-tha/the*.

More than half of our study was devoted to the formal aspect of VN formation. In our account of various terminations we have made a distinction between unproductive desinences, which have fallen into desuetude and whose attachment is regulated by lexical marking, and rule governed affixation processes. The number of lexically marked items was estimated to approximate *ca.* 270 items, which roughly equals the number of strong verbs in English. This seems a fairly managable set. The regular affixation rules were divided into two disjunctively ordered blocks. In the first block we find three parallel rules which respond to certain phonological properties of the base, i.e. the palatalisation rule, the rule of *-t* suffixation and the rule which leaves the verbal root intact. In the elsewhere block we find two rules which apply to verbs belonging to a specific conjugation. The default marker of the first conjugation is [ə]. Second conjugation verbs are subject to the rule attaching [uː]. The morphophonological modification is carried out on the part of the verb which remains after all inflectional desinences and thematic vowels have been cut off.

In the course of our analysis, we have made reference to other categories such as for example de-nominal verbs, de-adjectival verbs and, most interestingly, de-nominal VNs, each of which merits a separate study. We hope to take up these issues in further research.

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