

### Derivatives based on participles in Irish and Polish and the inflection-derivation distinction

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### **Abstract**

Greenberg's Universal 28 says that 'if both the derivation and inflection follow the root, or they both precede the root, the derivation is always between the root and the inflection' (Greenberg 1966: 93). Booij (1994: 27) undermines this by allowing inherent inflection to feed derivation. There is abundant literature showing that inherent inflection can feed derivation in Germanic, Romance and Slavic languages (Booij 1994, 1996, Chapman 1996, Rainer 1996, Cetnarowska 1999). The aim of this paper is to describe and compare derivational categories related to participle forms in Irish and Polish. These include among others agent nouns, adjectives of tendency/inclination, resultative passive adjectives and facilitative adjectives. Stump (2005: 52) points out that the terms present and past participle are, in fact, misnomers since participles are uninflected for tense, and they should be regarded as stems conveying aspect information plus the lexical information of the root. The existence of derivatives based on inflected forms is usually taken as evidence against the inflection-derivation dichotomy, and in favour of a tripartition into contextual inflection, inherent inflection and derivation. The paper addresses the theoretical ramifications of the existence of such derivatives for inferential-realisational approaches (Stump 2001), such as for example Beard's (1995) Lexeme-Morpheme Base Morphology, which separates the operations on the grammatical (morpholexical and morphosyntactic) features and operations responsible for the morphophonological modification of the root/stem.

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### 1. Introduction

Greenberg's Universal 28 says that 'if both the derivation and inflection follow the root, or they both precede the root, the derivation is always between the root and the inflection' (Greenberg 1966: 93). However, Booij (1994: 27) draws attention to certain inflectional formatives, to which he refers as inherent inflection, which can precede strictly derivational markers. There is abundant literature showing that inherent inflection can feed derivation in Germanic, Romance and Slavic languages (Booij 1994, 1996; Chapman 1996; Rainer 1996; Cetnarowska 1999). The aim of this paper is to identify and analyse derivational categories related to participle forms in Irish and Polish. These include among others active adjectives,

resultative passive adjectives, adjectives of tendency/inclination, facilitative adjectives and agent nouns. The existence of derivatives based on inflected forms is usually taken as an argument against the inflection-derivation dichotomy (Perlmutter 1988: 95), and a piece of evidence in favour of a tripartition into contextual inflection, inherent inflection and derivation (Booij 1994). This stand is a natural corollary of the morpheme-based approach to morphology. This paper will address the theoretical ramifications of the existence of such derivatives for inferential-realisational approaches (Stump 2001), such as for example Beard's (1995) Lexeme-Morpheme Base Morphology, which separate the operations on the grammatical (morpholexical and morphosyntactic) features from operations responsible for the morphophonological modification of the root/stem.

Participle is a term originally applied to adjectival forms of verbs in ancient Greek. Matthews (1997: 267) points out that they were regarded as a 'sharing' element (Greek  $metokh\bar{e}$ ) since they shared certain characteristics of verbs and nouns, i.e. they combined inflection for tense and aspect with inflection for case. Kuryłowicz (1964: 34) argues that conjugation includes nominal subparadigms and so participles and infinitives may discharge the function of nouns and adjectives without any morphological modification. Haspelmath (1996) puts forward the concept of word-class-changing inflection. In words resulting from inflectional word-class-changing morphology, the internal syntax of the base is preserved, whereas in words arising as a consequence of 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. German participles, as in (1) below, can be regarded as an instance of inflectional word-class-changing morphology:

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(1) ein den Richter überraschendes Faktum
a the Judge-acc. surprising-nom.sg. fact-nom.sg.
'a fact that surprises the judge'
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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 case, which means that the internal syntax is verbal, hence preserved. German participles are, therefore, non-finite verb forms.

With regard to derivational operations, Kuryłowicz (1936) was the first to point to the distinction between lexical and syntactic derivation. In the semantic or functional approach to word-formation, implemented in Slavic studies on word-formation, formatives are divided into 'mutational', 'modificational' and 'transpositional' (Dokulil 1962; Grzegorczykowa, Laskowski and Wróbel 1984). Mutation involves a semantic modification and a change in lexical category (e.g. Agentives, Instruments, Facilitative Adjectives), modification only a change in meaning (e.g. Diminutives and prefixal formations in English), whereas the process of transposition is asemantic and brings about only a change in lexical category (Nomina Actionis, Nomina Essendi, Relational Adjectives). 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'. However, Borer (1990) and Beard (1995) 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 they show different morphological and syntactic characteristics, as illustrated in (2) below:

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

The suffix -ing is the only marker of the syntactically formed participle, whereas the lexically derived adjective is additionally marked with -ive, -ant and -ary. The adjective can be prefixed with un-. 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) and if it 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. Active adjectives (unlike participles) are not confined to the predicative position and can be used attributively as in:

(3) a (very/un)surprising result a (very/un)moving story

Biber et al. (1999: 68–69) also note that if we are dealing with the verb, the *-ing* form will have a progressive (dynamic) meaning and will be followed by a verb complement (such as an object) as in (4a). If it is an adjective, it will not take verbal complements and its meaning will be stative, as in (4b):

- (4) a. His voice was irritating me.
  - b. His voice was (very) irritating.

According to Bauer (1983) past participles serve the function of adjectives when they are used attributively in prenominal positions, as in *a heated argument*, *a married man*, *the destroyed building*. Some participles can be modified by *very*, as in *his very reduced circumstances*, or can serve as derivational bases to which the suffix *-ly* is attached in the formation of adverbs, e.g. *heatedly*. In Borer (1990) we find examples such as *an unwoven rug* and *the uncrushed resistance*, which further confirm the adjectival status of the participles. Adams (2001) observes that adjectives related to past participles show resultative semantics, as in *The keeper's hand was severely bitten*.

In morphological models which adhere to the 'separation hypothesis' (Beard 1981, 1986, 1995; Laskowski 1981; Szymanek 1985; Malicka-Kleparska 1985; Bloch-Trojnar 2006) the formal identity of the adjective and the present/past participle does not mean that one is

derived from the other. Each of them may be regarded as related to the verbal root by a lexical and a syntactic operation respectively, which happen to be spelled out by the same formal exponent. There is one phonological entity, be it *-ing* or *-ed/en*, which may be put into inflectional and derivational uses.

In what follows, we shall take a closer look at those derivational categories in Polish and Irish which show a formal and semantic affinity to participles, and weigh the pros and cons of regarding them as products of inflection feeding derivation.

### 2. Participles and departicipial derivatives in Polish

### 2.1. The present and the passive participle as inflected verb forms

The present participle is characterized by the ending -qc(y), and can only be formed from imperfective verbs, whereas the passive participle is formed from transitive verbs and is marked with the suffixes -n(y) or -t(y), as illustrated in (5) below:

(5)	Verb	<b>Present Participle</b>	Passive Participle	
	pisać 'to write, impf.'	piszący	pisany	
	pić 'to drink, impf.'	pijący	pity	
	wypić 'drink up, pf.'	-	wypity	
	pracować 'to work, impf.'	pracujący	_	

High generality coupled with formal and semantic predictability, led Laskowski (1984) and Cetnarowska (1999) to conclude that participles are inflectional forms of verbs. Borrowed transitive verbs such as *kserować* 'make a Xerox copy' or *resetować* 'reset', will give rise to passive participles if they are transitive and to active ones providing that they are imperfective, *kserowany*, *kserujący*, *resetowany*, *resetujący*. In formal terms, the suffixes *-n-/-t-* and *-ąc-* are not in competition with other co-functional markers. Participles preserve the internal syntax of finite verbs since they can take the direct and indirect objects, and can be combined with manner and locative adverbials. Their external syntax is adjectival, i.e. they agree in case, number and gender with the head nouns they modify. Consider the examples in (6) below (Cetnarowska 1999: 167–68):

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    (6) a. oddane później właścicielom psy
return-PPRT-nom.pl later owners-dat.pl. dog-nom.pl
'dogs that were returned later to their owners'
    b. znaleziony przez chłopców w jaskini skarb
find-PPRT-nom.sg.masc. by boy-gen.pl. in cave-loc. treasure-nom.sg.masc.
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'the treasure found by the boys in a cave'

Notably, the examples in question seem a bit stilted and artificial. Their variants with participles postposed, in which case they could be interpreted as reduced relative clauses, sound decidedly better, i.e. *psy oddane później właścicielom* 'dogs that were returned later to

their owners' and *skarb znaleziony przez chłopców w jaskini* 'the treasure found by the boys in a cave'.

### 2.2. Derivatives based on the present participle

Cetnarowska claims that the present participle can undergo conversion into an adjective and argues for a semantic difference between the two categories (see also Bartnicka 1970 and Rabiega-Wiśniewska 2008). Namely, the adjective, as opposed to the participle, has a modal (potential) reading 'such that can V', as in (7):

- (7) a. napój chłodzący 'cooling drink' (cf. chłodzący 'cooling')
  - b. pocisk zapalający 'incendiary shell' (cf. zapalający 'setting fire to something')
  - c. bomba burząca 'demolition bomb' (cf. burzący 'destructive')
  - d. proszek wybielający zęby 'whitening tooth paste' (cf. wybielający 'whitening')
  - e. tabletki łagodzące bóle głowy 'pills relieving headaches' (cf. łagodzący 'soothing')

On Cetnarowska's analysis, the forms accompanied by objects in the accusative case, as in (7d) and (7e) above, are adjectives owing to their modal (potential) reading.

I would like to take her up on two points. Firstly, in view of Haspelmath's (1996) distinction, the forms in (7d) and (7e) should be regarded as instances of category-changing inflection, i.e. participles with the external syntax of an adjective and the internal syntax of a verb. If the internal syntax remains unaltered, the process involved cannot be perceived as derivational. Secondly, the semantics of the forms in -qc- need not always be potential. To put it in other words, the potential reading is indicative of category change, but forms with purely verbal semantics may also be adjectival. In traditional accounts of the transpositional category of deverbal adjectives a distinction is made between forms with unpredispositional and predispositional semantics (Kallas 1999). The former are purely transpositional and name a quality of a thing or phenomenon which is connected with an activity, process or state, e.g. znak ostrzegawczy 'a warning sign, such that warns', tkanka lączna 'connective tissue, such that connects'. Predispositional adjectives show an extra semantic tinge, which may express potentiality uleczalny 'curable, such that can be cured', kurczliwy 'contractible'. The dividing line between the two categories may be difficult to draw in individual cases.

I agree with Cetnarowska that we are dealing with adjectives where the -qc- form is not followed by any verbal modifiers. The semantics of such forms is equivalent to that of relative clauses, e.g. balsam ujędrniający 'balm that firms (the body)'. Consider some more examples in (8), where no potential reading is necessarily involved.

(8) balsam ujędrniający 'firming body lotion'
firma sprzątająca 'contract cleaners'
kapsułki piorące 'washing capsules'
krem nawilżający 'moisturizing cream'
kuracja odchudzająca 'weight loss program'
lakier impregnujący 'impregnating varnish'
lakier utrwalający (do włosów) 'firm hold hairspray'
maść gojąca 'ointment that heals wounds'

maść rozgrzewająca 'warming ointment'
płyn zmiękczający (do prania) 'fabric softener'
sprzęt nagłaśniający 'sound system'
system chłodzący 'cooling system'
środek czyszczący (do podłóg) 'cleaner'
środek odurzający 'intoxicant'
środek przeczyszczający 'laxative'
środki dezynfekujące 'disinfectant'
środki spulchniające 'raising agent'
taśma klejąca 'adhesive tape'
tusz pogrubiający (do rzęs) 'volumising mascara'
żel nabłyszczający (do włosów/ do paznokci) 'gloss hair gel/gloss nail gel'

Only in three cases, objects were found following the *-ac-* form:

- (9) a. maść gojąca rany 'ointment that heals wounds'
  - b. balsam ujędrniający uda/brzuch 'lotion that firms thighs/abdomen'
  - c. tusz pogrubiający rzęsy 'volumising mascara'

Instead of the object, it is more common to find a PP complement with *do* 'for', as in *żel nabłyszczający* (*do włosów*/ *do paznokci*) 'gloss hair gel/gloss nail gel', which means that we are dealing here with adjectives and not verbal forms preserving their argument structure. The availability of two alternative syntactic configurations might be indicative of two different -*ąc*-forms, one adjectival and one verbal.

Forms in -qc- are adjectives since they can give rise to adverbs, as in *chłodzący* 'cooling'  $\rightarrow$  *chłodząco* 'with the cooling effect', *odurzający* 'dizzying, stupefying'  $\rightarrow$  *odurzająco* 'dizzyingly', *łagodzący* 'palliative, soothing'  $\rightarrow$  *łagodząco* 'soothingly' (Cetnarowska 1999). For Cetnarowska -qc- adjectives are products of participle  $\rightarrow$  adjective conversion.

However, on an alternative analysis they could be regarded as derivatives based on the verbal root with the aid of the suffix -qc(y). Actually, the suffix is listed by Kallas (1999: 471–477) as one of many rival suffixes rendering the transpositional function together with, e.g. -ny, -liwy, or -czy. It is worth noting that in some cases there are two forms available for a given verbal base. The forms listed in (8) take the suffix -qc(y) and this suffix alone. However, there are -(q)cy forms generated side by side with adjectives marked with other suffixes. They also show participial uses with verbal internal syntax. Consider some examples from the National Corpus of Polish (Przepiórkowski et al. 2012), where the form in (a) is a derivational adjective, the form in (b) is the -(q)cy form in the function of the participle, and the form in (c) is homophonous with it, but is devoid of any verbal complements and is either semantically equivalent with or slightly different from the form in (a):

- (10) a. przenikliwy wzrok/ból/brzęk/głos
  - 'penetrating, keen sight/acute pain/strident sound/shrill voice'
  - b. Zostały mu po niej jedynie włosy, czerwona sukienka i **przenikający** wszystko zapach najtańszych perfum.
    - 'The only traces of her were hair, the red dress and the smell of cheap perfume permeating everything.'
  - c. Niekiedy zawiewał zimny, przenikający wiatr.
    - 'There were gusts of penetrating wind.'

- (11) a. Chodzi o masaż **leczniczy**, nie o usługi seksualne.
  - 'It's about a therapeutic massage, not sex services'
  - b. *to komputerowy stymulator mowy, leczący głuchych* 'it's a computer speech stimulator (for) treating the deaf'
  - c. *wymienia wyłącznie kuratora i zakład leczący*, *a nie wymienia prokuratora* 'it mentions only the probation officer and the therapeutic site, it does not mention the prosecutor'
- (12) a. wędrowne ptaki 'migrating birds'
  - b. Resztki jedzenia są wymarzoną pożywką dla bakterii, a także przyciągają **wędrujące** przez przewody wentylacyjne karaluchy
    - 'leftovers are a perfect nutrient for bacteria, they also attract cockroaches wandering in ventilation ducts'
  - c. *nieszkodliwy reumatyzm*, *słabe* **wędrujące** *bóle*, *spadek samopoczucia* 'mild rheumatism, weak changeable pains, feeling low'
- (13) a. usłyszałem w tej chwili **błagalny** szept Iwony
  - 'then I heard Ivonne's begging whisper'
  - b. *Jego pokorny gest błagający o litość i o zwłokę jest więc aż nadto zrozumiały* 'his humble gesture begging for mercy and deferment is all too clear'
  - c. ostatnimi jego słowami był **błagający** krzyk synku, za co, nie zostawiaj mnie! 'His last words were a begging cry my son, what for, don't leave me!'
- (14) a. *Niezbyt wojowniczy Bolesław Wstydliwy wrócił zresztą do Krakowa* 'not too militant King Boleslaus the Shy came back to Cracow'
  - b. *Są jednak nasi dzielni wojujący o piękno mowy polskiej profesorowie Gasiński i Niedzielski* 'there are the brave professors Gasiński and Niedzielski fighting for the beauty of the Polish language'
  - c. Wojujący islam/feminizm 'militant islam/feminism '
- (15) a. *Usługi/haki/firmy holownicze* 'hauling services, hooks, companies'
  - b. *auto holujące ze zbyt dużą prędkością samochód Audi A4* 'the car hauling Audi A4 at too high a speed'
  - c. *Firmy holujące walczą coraz zacieklej o klienta* 'Hauling companies are fighting ever more fiercely for customers.'
- (16) a. Wiercenia poszukiwawcze 'searching drills'
  - b. *Policjant poszukujący wielokrotnego mordercy* 'a policeman looking for a serial killer'
  - c. *Człowiek poszukujący i świadomy siebie wie, że walka z samotnością nie ma sensu* 'a searching man who is conscious of himself knows that the fight with loneliness makes no sense'

The existence of such doublets might be due to the failure of the mechanism of blocking which is sensitive to the tenuous semantic differences between the two adjectives or it may indicate that there are two routes of forming deverbal adjectives, namely by means of derivation with the aid of the -(qc)y suffix and by means of conversion of active participles. Two alternative analyses are also available for Agent nouns. Cetnarowska (1999: 175) enumerates a number of examples where the Agent noun can be regarded as the product of conversion of the active participle, e.g. przewodniczący 'chairperson, lit. presiding over', służąca 'servant maid, lit. serving'. As in the case of active adjectives, we can find cases where

the process of conversion occurs parallel to the derivation of Agent nouns from the same verbal root (17b), e.g.

(17)	Verb	NA based on the root	NA based on the present prt.
a.	służyć 'serve'	służ <b>ący</b>	służący
	konać 'die'	konaj <b>ący</b>	konający
	kupować 'buy'	kupuj <b>ący</b>	kupujący
	głosować 'vote'	głosuj <b>ący</b>	głosujący
b.	palić 'smoke'	pal <b>acz</b>	palący
	<i>pić</i> 'drink'	pij <b>ak</b>	pijący
	sprzedawać 'sell'	sprzedaw <b>ca</b>	sprzedający
	kierować 'drive'	kierow <b>ca</b>	kierujący
	grać 'play'	gr <b>acz</b>	grający
	pracować 'work'	pracow <b>nik</b>	pracujący

Interestingly, Grzegorczykowa and Puzynina (1999) do not recognize -qc(y) as a distinct marker of Agent nouns. This may be due to the fact that -qc(y) derivatives denote Agents, but the actions they perform are not necessarily habitual or professional. They refer to the performers of transient, one-off or irregular activities. They could, therefore, be labeled Episodic Agents. This would explain the existence of doublets and the semantic link with participles.

### 2.3. Derivatives based on the passive participle

Passive participles in Polish are based on transitive verbs regardless of their aspect specification. Therefore, like verbs, they can be modified by appropriate temporal adverbials which signal the duration or completion of an action, as shown in (18a) and (18b) respectively (Cetnarowska 1999: 169):

- (18) a. *Kaczki były pieczone przez dwie godziny ale były twarde.* duck-nom.pl were roast-PPRT-impf. for two hours but were tough 'The ducks were being roasted for two hours but they were tough.'
  - b. Wszystkie indyki zostały upieczone i zjedzone w ciągu wczorajszego wieczora. all turkey-nom.pl. became-3pl. roasted-PF and eaten-PF in course yesterday-adj. evening-gen. 'All (the) turkeys were roasted and eaten during yesterday evening.'

Cetnarowska claims that passive participles undergo conversion into adjectives. Despite formal identity, there is a semantic difference between the two in that adjectivised participles based on imperfective verbs convey a perfective meaning and refer to results of completed actions.

- (19) a. pieczony indyk 'roasted turkey' (cf. piec<sup>I</sup> upiec<sup>P</sup> 'to roast')
  - b. malowane jajka wielkanocne 'painted Easter eggs' (cf. malować¹ pomalować² 'to paint')
  - c. *zapiekane warzywa* 'baked vegetables' (cf. *zapiekac*<sup>1</sup> *zapiec*<sup>P</sup> 'to bake')

Furthermore, Cetnarowska's view is additionally supported by the fact that the forms in (19) have lost their verbal combinatorial properties – they cannot take temporal, manner or place adverbs, and cannot be modified by agentive adjuncts. What lends even further support to this claim is the ability of adjectives to be preposed, which is typical of the Polish word order. In the case of participles, preposing is not impossible, but it sounds awkward. For instance, it is natural to say *indyk pieczony* or *pieczony indyk*, while *?pieczony przez godzinę indyk* is questionable. Corpus data on the occurrence of departicipial adjectives show similar frequencies for the preposed and postposed adjectivised participles:

(20)	Passive participle	Frequency of the adjectivised participle in the postnominal position	Frequency of the adjectivised participle in the prenominal position
	kiszony	ogórek kiszony 18	kiszony ogórek 14
	'fermented, pickled'	'pickle'	ʻpickle'
	wędzony	łosoś wędzony 4	wędzony łosoś 4
	'preserved by smoking'	'smoked salmon'	'smoked salmon'
	pieczony	schab pieczony 9	pieczony schab 6
	'baked, roasted'	'roasted pork loin'	'roasted pork loin'

Cetnarowska (1999: 169–170) adopts for passive participles a similar analysis to the one proposed for active participles. Namely, the forms in (20) are adjectives, but they are closely related to passive participles since they can take agentive adjuncts and complements. For Cetnarowska *zapiekanych* in (21) below is an adjectivised participle:

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(21) Spróbuj warzyw zapiekanych przeze mnie w sosie koperkowym. try-imper.sg. vegetables-gen. baked-gen.pl. by me in sauce dill-adj. 'Try some vegetables baked by me in the dill sauce.'
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This approach in our view is inconsistent. Such forms should not be perceived as adjectives, but as participles which like verbs can take typically verbal complements and adverbials (agentive adjuncts, or adverbs of manner and duration). Participles, unlike adjectives, can take on the function of the verb in a reduced relative clause (22c).

- (22) a. Kurczak był duszony przeze mnie przez godzinę pod przykryciem, ale był twardy. 'The chicken was being stewed by me for an hour but it was tough.'
  - b. Kurczak, który był duszony przeze mnie przez godzinę pod przykryciem, był twardy. 'The chicken, which was being stewed by me for an hour, was tough.'
  - c. Kurczak duszony przeze mnie przez godzinę pod przykryciem, był twardy. 'The chicken, stewed by me for an hour, was tough.'

The participial markers -n/t- as in rana cięta 'a cut' or kurczak pieczony 'roasted chicken' are listed as derivational suffixes forming objective deverbal adjectives, i.e. adjectives which modify nouns spelling out the role of Patient with regard to the base verb. The formal overlap between participles and adjectives is considerable, but not complete, since there are cases where a derived 'objective' adjective is distinct from a passive participle, e.g. upraw-n(a)ziemia

'arable land' vs. *uprawi-an(a)* 'cultivated, pprt'. Therefore, resultative adjectives may be regarded as products of conversion of participles or derivation from base verbs.

Analogically to active participles, adjectivised passive participles can serve as bases for further derivation. Cetnarowska (1999) enumerates a number of derivational categories which can be interpreted as taking departicipial adjectives as their base. These include, among others, resultative nouns terminating in -k(a). These nouns denote objects that come into existence or change their features in the course of the events denoted by the corresponding verbs. The category is productive in the area of specialized vocabulary. Some examples are provided in (23) below:

### (23) Departicipial Adjective

## prażony 'roasted' kiszony 'fermented, pickled' bity 'beaten, crushed' wędzony 'preserved by smoking' zapiekany 'baked'

### **Resultative Noun**

prażonka 'roasted ore'
kiszonka 'silage'
bitka 'cutlet'
wędzonka 'smoked bacon'
zapiekanka 'dish baked in oven'

Patient nouns and names of results or affected objects listed in (24) show a perfective reading like the nouns in (23) above. However, resultative nouns in (23) are formally related to imperfective verb forms, while the nouns in (24) below are formally related to perfective verbs, which, according to Cetnarowska (1999), means that they might be directly derived from inflectional passive participles.

### (24) Departicipial Adjective/ Passive Participle

# a. opętany 'possessed of evil' przesiedlony 'displaced, rehoused' wygnany 'expelled, banished' wychowany 'brought up' wybrany 'chosen' wysłany 'sent'

### b. roztrzepany 'beaten up' nabyty 'acquired' zbity 'fused, collapsed'

### Patient Noun marked with -ec, -nik, -ek, -k(a)

opętaniec 'one possessed of evil' przesiedleniec 'emigrant, displaced person' wygnaniec 'exile, outcast' wychowanek 'alumnus' wybranka 'the girl of one's choice' wysłannik 'envoy'

### Object Noun marked with -ec, -ek, -k(a)

roztrzepaniec 'sour milk that has been beaten' nabytek 'acquisition' zbitka 'fusion, blend'

Szymanek (2010: 50–56) points to the possibility of deriving the nouns in (24) directly from verbal bases by means of the suffixes *-aniec/-eniec*:

### (25) **Verb**

skaz-ać 'to condemn somebody' wysiedl-ić 'to displace somebody' posł-ać 'to send somebody' wygn-ać 'to expel somebody'

### Patient Noun in -aniec/-eniec

skaz-aniec 'condemned person, convict' wysiedl-eniec 'displaced person' posl-aniec 'messenger, courier' wygn-aniec 'exile, outcast' Similarly, the resultative nouns terminating in -k(a) from (23) could be reanalysed as derived from verbal bases by the addition of the suffix -anka/-onka.

### (26) **Verb**

### Resultative Noun in -onka/-anka

praż-yć 'to roast'
wędz-ić 'to preserve something by smoking'
zapiek-ać 'to bake'

praż-onka 'roasted ore'
wędz-onka 'smoked bacon'
zapiek-anka 'dish baked in oven'

Both approaches are equally plausible and their choice seems to be a matter of one's theoretical underpinnings. Frameworks with an inflection-derivation dichotomy which additionally adhere to the separation of the functional and formal component will find the latter approach more suitable. Adherents to the morpheme-based tripartition approach will opt for inflection feeding derivation. In sum, the data from Polish cannot be used to argue that one approach is superior to the other.

### 3. Participles and departicipial derivatives in Irish

### 3.1. Non-finite verb forms - the verbal noun and the verbal adjective

The Irish language has two non-finite verb forms which in traditional grammars are referred to as the verbal noun (VN) and the verbal adjective (VA) (de Bhaldraithe 1953; Ó hAnluain 1999). The VN is an extremely versatile category, used in a variety of contexts. Among others, it features in the contexts where English uses the infinitive or the present participle to express the progressive. The form  $\delta l$  in (27) is the VN of the verb  $\delta l$  'drink'. Despite surface homonymy each category is identifiable in the syntactic context (Bloch-Trojnar 2006: 59–114).

(27) a. Caithfidh sé beoir a ól. Infinitive must he beer-acc. PRT drink-VN 'He has to drink beer.'
b. Bhí sé ag ól beorach. Present Participle

b. Bhí sé ag **ól** beorach.

was he PRT drink-VN beer-gen.

'He was drinking beer.'

The inflectional status of the VN is frequently questioned on account of the fact that, according to traditional grammars, it can inflect for case. On closer inspection it turns out, however, that the genitive case of the VN is not a case ending but a positional variant of the present participle (Bloch-Trojnar 2006: 80–90). It should be regarded as a non-finite form since it is obligatorily followed by the following object. To make matters more intricate, this

VNs in modal constructions, as in (27a) (but also in prospective and perfective ones) are infinitives, because they are preceded by the leniting particle *a* and the object noun in the accusative case. In the progressive construction (27b), the VN is interpreted as the present participle since it is preceded by the particle *ag* and it is followed by the object in the genitive case (McCloskey 1983; Doyle 2002; Bloch-Trojnar 2006; Carnie 2011).

form is homonymous with the so-called verbal adjective, i.e. the past participle. Consider the examples in (28) below:

(28) a. lucht **ólta** beorach **Genitive case of VN** people drink-pres.prt.gen. beer-gen. (**Present Participle**)

'beer drinkers'

b. *Tá* an beoir **ólta**. **Verbal Adjective** is the beer drink-PPRT **(Past Participle)** 

'The beer has been drunk.'

These two forms are in the focus of our attention. Their formation is fairly regular and predictable on the basis of the phonological properties and conjugation class of the base verb and involves either the suffix *-ta/te* or *-tha/the* (Ó hAnluain 1999; Bloch-Trojnar 2006: 83). The formal overlap is not complete since the positional variant of the present participle is not equivalent with the past participle in the case of *-áil* VNs such as *pábháil* 'pave-VN', whose VN genitive is formed by the addition of depalatalising *-a*, and not *-te*:

(29) a. fear **pábhála** sráide Genitive case of VN man pave-pres.prt.gen. street-gen.pl. (Present participle)

'a man paving streets'

b. *Tá an tsráid pábháilte.*is the street pave-PPRT **Verbal Adjective**(Past participle)

'The street has been paved.'

As mentioned above, the present participle is obligatorily followed by a modifying object NP, and this structure is equivalent to a construction with the infinitive, as in (30b) below:

(30) a. *lucht ólta poitín* people drink-pres.prt.gen. poteen-gen. 'people drinking poteen'

b. *lucht poitín a ól*people poteen-acc. PRT drink-VN
'people drinking poteen'

In what follows we will propose alternative analyses for a range of derivational categories identified as based on inflection in Bloch-Trojnar (2015).

### 3.2. Derivatives based on the present participle

### 3.2.1. Adjectives of tendency and inclination (subjective) based on the present participle

It is not uncommon cross-linguistically for present participles to undergo conversion into, or to serve as the base for, adjectives. The adjectives in question are active adjectives or adjectives of tendency and inclination (subjective) as in, for example *the sleeping beauty* and *a very/rather/more/less interesting task* respectively (Borer 1990; Beard 1995: 196, 321). Notably

not all deverbal adjectives coincide in form with the present participle (cf. productive, repentant, complimentary in (2) above). We have seen that in Polish, there is a formal distinction between derived 'subjective' adjectives and present participles, e.g. plemię wędrowne 'wandering tribe', where wędrow-ne is formally distinct from wędruj-ące 'wandering, pres.prt' (Szymanek 2010: 103). However, present participles can undergo conversion into adjectives, as in napój chłodzący 'cooling drink' or bomba burząca 'demolition bomb' (Cetnarowska 1999: 173). The transposition of a verb to an adjective may be accompanied by a range of additional semantic characteristics relating to such modal concepts as possibility or ability, and concepts expressed in the paraphrase by adverbial modifiers such as constantly, easily, much (Szymanek 2010: 101–103), e.g. kochliwy 'somebody who falls in love easily, frequently'.

Deverbal adjectives belonging to this category in Irish bear a formal resemblance to the variant of the active participle used to modify nouns. The base is, for all intents and purposes, a form terminating in -t(h)a/-t(h)e. We cannot treat them as derivatives related to passive participles on account of their active semantics, i.e. they have a potential rather than a resultative tinge. Consider the examples in (31):

(31)	Verb, VN	<b>Present Participle</b>	Adjective of inclination
	ól 'drink'	ólta	óltach 'addicted to drink'
	abair, rá 'say'	ráite	ráiteach 'talkative, garrulous'
	braith, brath 'perceive'	braite	braiteach 'perceptive'
	sáigh, sá 'stab, thrust'	sáite	sáiteach 'thrusting, stabbing, intrusive'
	loit, lot 'hurt, injure'	loite	loiteach 'injurious, damaging'
	mol, moladh 'praise'	molta	moltach 'laudatory, given to praise'

The suffix -(e)ach does not compete with other markers. The resulting adjective is semantically equivalent to the active participle form used to modify a noun, but distinct formally, e.g.

- (32) a. Ní duine moltach mé. 'I am not given to praise.'
  - b. amhráin molta báid 'a song in praise of boats'

The question to be resolved here is whether we are dealing with derivation making use of an inflected verb form as the base or the derivation from the verbal base by means of the suffix t(e)ach/th(e)ach rather than -(e)ach which is added to the participle form. Let us recall that that positional variants of VNs in -áil are formed by means of -a (cf. (29) above). Consider some examples of corresponding adjectives in (33) below:

(33)	Verb/VN	<b>Present Participle</b>	Adjective of inclination
	righneáil 'linger, lingering'	righneála	righneálach 'lingering, loitering, dawdling'
	buaiceáil 'showing off; swagger'	buaiceála	buaiceál <b>ach</b> 'swaggering, swanky'
	gloinceáil 'rocking, swaying'	gloinceála	gloinceálach 'rocking, swaying, unsteady'
	bóisceáil 'boasting'	bóisceála	<i>bóisceál<b>ach</b> 'boastful'</i>
	póitreáil 'gormandizing'	póitreála	<i>póitreál<b>ach</b> 'gormandizing'</i>
	gleotháil 'making a noise, fussing'	gleothála	gleothál <b>ach</b> 'noisy, fussy'

If we recognize the positional variant of the present participle as the base for adjectives of inclination our analysis will be more elegant, since all adjectives will uniformly be derived by means of the suffix -(e)ach. If we opt for the verbal root as the base we would have to postulate two allomorphs (i.e. -t(e)ach/th(e)ach and -(e)ach) whose distribution is morphologically conditioned.

### 3.2.2. Agent nouns based on the present participle

It is not uncommon cross-linguistically to form Agent nouns from present participles. For example, in French the present participle resist-ant(e) related to the verb resist-er 'resist' is interpreted as 'resisting/resistance fighter' (Beard 1995: 314). In Polish, present participles may also be converted into agents, e.g. przewodniczący 'presiding over'  $\rightarrow przewodniczący$  'chairperson' (Cetnarowska 1999: 175). The same is true of German, e.g. reisen 'travel'  $\rightarrow reisend$  'travelling'  $\rightarrow der$  Reisende 'traveller'. In line with this cross-linguistic tendency and counter to Doyle (1992) who proposes to derive Agent nouns from VNs and genitive forms of VNs, in Bloch-Trojnar (2008) I analyse Agent nouns as based on the verbal root and the present participle, as shown in (34a) and (34b) respectively.

(34)	a.	Verb (citation form)	Verbal root		Agent Noun
		tosnaigh 'begin' foghlaim 'learn' scar 'spread' figh 'weave'	tosn- foghlaim- scar- fí-		tosn <b>óir</b> foghlaime <b>oir</b> scara <b>dóir</b> fío <b>dóir</b>
	b.	Verb (citation form)	Verbal root	Present Participle	Agent Noun
		buail 'thresh' nigh 'wash' ceannaigh 'buy' imir 'play' bácáil 'bake'	buail- ní- ceann- imir- bácál-	buailte nite ceannaithe imeartha bácála	buailte <b>oir</b> nite <b>oir</b> ceannaithe <b>oir</b> imearth <b>óir</b> bácála <b>í</b>

The availability of two bases often results in derivational doublets, variants which do not contrast in meaning and so can be used interchangeably.<sup>2</sup> Consider some examples in (35).

(35)	Verb	Agent nouns
	teilg 'throw'	teilgeoir / teilghtheoir
	maslaigh 'insult'	maslóir / maslaitheoir
	fiosraigh 'inquire about'	fiosróir / fiosraitheoir
	ciontaigh 'blame, accuse'	ciontóir / ciontaitheoir
	fostaigh 'employ'	fostóir / fostaitheoir
	foirgnigh 'build'	foirgneoir / foirgnitheoir
	imir ʻplay'	imreoir / imearthóir
	réab 'tear, rend'	réabóir / réabthóir

<sup>&</sup>lt;sup>2</sup> We cannot rule out the possibility that there are dialectal factors at play here.

Whereas in Polish there is conversion (or alternatively derivation with the aid of the suffix homonymous with the participial marker), in Irish, the agentive suffix can be added to the root or to what appears to be an inflectional form.

### 3.2.3. The past participle – adjective conversion

Participles, apart from combining with verbs, as in (28b) above, may be used like adjectives. They may be used predicatively, as shown in (36a) and attributively to postmodify a noun, as demonstrated in (36b) below.

(36)		Verb	Past participle = VA	Adjective
	a.	dóigh 'burn'	dóite	Is dóite an blas atá air.
				'It has a bitter/burning taste.'
		caill 'lose, perish'	caillte	Tá mé caillte leis an ocras.
				'I am perished with hunger.'
	b.	bris 'break'	briste	balla briste 'broken wall'
		glan 'clean'	glanta	cuma ghlanta 'clean look'
		críochnaigh 'finish'	críochnaithe	ball críochnaithe 'finished article'

The past participle undergoes conversion into a resultative passive adjective. That we are, indeed, dealing with adjectives is confirmed by their ability to form corresponding adverbs. Adverbs are normally formed by putting the particle *go* in front of the adjective, e.g. *maith* 'good' – *go maith* 'well' (Doyle 2001: 37).

(37)	Verb, Past prt	Adjective	Adverb
	oscail, oscailte 'open'	fuinneog oscailte	Dúirt sé go hoscailte é.
		'open window'	'He said it openly'
	múin, múinte 'teach'	páistí múinte	labhairt go múinte
		'well-taught children'	'to speak civilly'

Since adverbs are formed analytically, we cannot say that departicipial adjectives serve as input for further derivation. However, departicipial adjectives can be prefixed with dea-'good, well' as in, ordaigh, ordaithe 'order, pprt.' – dea-ordaithe 'well-ordered', líon, líonta 'fill, pprt.' – dea-líonta 'well-filled', cum, cumtha 'form, shape, pprt.' – dea-chumtha 'well-shaped, shapely'. Adjectives resulting from the conversion of past participles also sporadically give rise to names of patients and objects/results. Names related to adjectives do not have to be deverbal, e.g. plait 'bare patch' – plaiteach 'patchy, bold' – plaiteachán 'bold person', íortha 'angry, mad, deranged' – íorthachán 'deranged, mad person'. Hence, it is plausible to regard names of patients as derived from adjectives and not directly from participles, e.g. cloígh, cloíte 'wear down, subdue, pprt.'  $\rightarrow$  cloíte 'worn down, subdued'  $\rightarrow$  cloíteachán 'weak, subdued person, mean-spirited person'. Another marginal class that can be formally and semantically related to adjectives resulting from the conversion of perfective participles are resultative nominalisations, which are marked with a variety of formatives such as -óg, -as, -án, e.g. gearr, gearrtha 'cut, pprt'  $\rightarrow$  gearrtha 'cut'  $\rightarrow$  gearrthóg 'cutting, snippet, cutlet'. Deadjectival

Nomina Essendi are formed from adjectives with the aid of various suffixes (Doyle 1992), e.g.  $-(e)acht\ liath\ 'grey' - liathacht\ 'greyness'$ . Adjectives resulting from the conversion of perfect participles act as bases for the derivation of such abstract nouns, e.g. cas, casta 'twist, pprt.'  $\rightarrow$  casta 'twisted, wound'  $\rightarrow$  castacht 'complexity, intricacy', caith, caite 'spend, consume, pprt.'  $\rightarrow$  caite 'worn, consumed, spent'  $\rightarrow$  caiteacht 'thinness, emaciation', suigh, suite 'sit, situate, pprt.'  $\rightarrow$  suite 'situated, fixes'  $\rightarrow$  suiteacht 'fixity, stability', sabhail, sabhailte 'save, pprt.'  $\rightarrow$  sabhailte 'safe'  $\rightarrow$  sabhailtecht 'safeness, safety'.

### 3.2.4. Past participles as bases for facilitative adjective derivation

In addition to adjectives of inclination, verbs may give rise to passive potential or facilitative adjectives, such as *readable* or *manageable* in English. Like in English, in Polish a derived 'objective' adjective is also distinct from a passive participle, e.g. *upraw-na ziemia* 'arable land' vs. *uprawi-ana* 'cultivated, pprt'. In Irish, such adjectives are formally related to past participles. The semantics 'that can be done' is expressed by the leniting prefixes *so*<sup>L</sup>- and *in*<sup>L</sup>-, as exemplified in (38a) and (38b) respectively. The prefix *do*<sup>L</sup>- in (38c) adds an extra element of negation.

(38)		Prefix	Verb, pprt	Passive potential adjective
	a.	so <sup>L</sup> -	ceannaigh, ceannaithe 'buy' meal, meallta 'beguile' ceannsaigh, ceansaithe 'appease'	socheannaithe 'easily bought, venal' somheallta 'easily beguiled, gullible' socheansaithe 'appeasable, docile'
	b.	in <sup>L</sup> -	pós, pósta 'marry' bris, briste 'breakable' caith, caite 'wear'	inphósta 'marriageable' inbhriste 'breakable' inchaite 'wearable, presentable'
	c.	do <sup>L</sup> -	inis, inste 'tell, relate' feic, feicthe 'see' smachtaigh, smachtaithe 'control'	do-inste 'undescribable' do-fheicthe 'undiscernible' dosmachtaithe 'ungovernable, unruly'

If we accept the participles as the base, again our analysis is more elegant. If we insisted on treating the root as the derivation base we would be dealing with prefixal-suffixal derivation, which is attested nowhere else in Irish.

### 4. Conclusion

In Polish, participles can be interpreted as acting as bases for conversion into adjectives and the formation of Agent nouns and Resultative object nouns. An alternative account where derivational operations target the verbal root and supply suffixes which contain -qc/-n/-t in their make-up seems equally plausible. The existence of doublets seems to point to a solution where the two routes are simultaneously available.

In Irish, in addition to the expected conversion of participles into adjectives, we can see that agents, adjectives of inclination and passive potential adjectives are formally and semantically related to participles, and are best analysed as being synchronically derived from them. Other derivatives, such as Resultative nouns, Patientive nominals and Nomina Essendi should be regarded as derived from adjectives which result from the conversion of inflected verbal forms.

Thus, it is the Irish material that poses a problem for approaches which opt for a strict division of labour between derivational and inflectional operations. However, the fact that participles can serve as bases for derived words need not be used as an argument against split morphology. Instead, it may be used as an argument in favour of regarding aspect as a morpholexical category. Stump (2005: 52) points out that the terms present and past participle are, in fact, misnomers since participles are uninflected for tense, and they should be regarded as stems conveying aspect information plus the lexical information of the root.

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