Old Irish *gniid* 'makes, does',
Middle Welsh *gweinydaf* 'serve', and *i*-presents

Zusammenfassung

Altirisch gniid *und die damit verwandten britischen Äquivalente müssen auf* $*$gnī-i̯e/o- *zurückgehen, während der alternative Stamm* $*$gnĭ-i̯e/o- *eine sekundäre Entwicklung darstellt. Dies zeigt sich in der Existenz eines Verbalnomens* $*$gnī-mu- *und eines Verbal-adjektivs* $*$gnī-to- *sowohl im Irischen als auch im Britannischen, die nur auf der Basis eines Präsensstamms* $*$gnī-i̯e/o- *entstanden sein können. Dieser Präsensstamm wiederum muss auf* $*$ĝneh₁-i̯e/o- *zurückgehen, die Wurzel hat aber üblicherweise die Form* $*$ĝenh₁-. *Der unerwartete ‚Schwebeablaut' kann erklärt werden, wenn* $*$ĝneh₁-i̯e/o- *zu einer von* Jasanoff (2003) *identifizierten Präsensbildung gehört, die ursprünglich von einem Suffix* $*$-i-, *Ablaut in der Wurzel und einem ‚Schwebeablaut' in Wurzeln der Form* $*$CeRH- *charakterisiert wurde.*

Old Irish *gniid* 'makes, does' and its Brittonic equivalents Middle Welsh *gweinydaf* 'serve', Middle Breton *gounez* (3 sg.) 'wins, obtains, conquers, cultivates', Middle Cornish *gonetheff* 'work' are etymologically problematic in a number of ways.[1] To begin with, they seem to diverge in the length of the vowel in the root. Before another vowel long vowels were shortened in Irish, but forms like 1pl. *gnímmi* seem to require a reconstruction $*$*gnī-i̯e/o-*. By comparison, the Brittonic forms all point to a reconstruction $*$*(u̯o-)gnĭ-i̯e/o-*.[2] I briefly discussed this discrepancy in Zair (2009), where I suggested that the Proto-Celtic present stem was $*$*gnī-i̯e/o-* on the basis of the verbal adjective $*$*gnī-to-* and the verbal noun $*$*gnī-mu-*. In the first part of the present article I will explain the reasoning behind this argument at greater length, and show that these forms are exactly what is to be expected to correspond to a present stem $*$*gnī-i̯e/o-*, and that their formation cannot be plausibly explained if the Proto-Celtic present stem was $*$*gnĭ-i̯e/o-*. In the second part of the article I will suggest a way that the problems that arise from the commonly accepted connection of *gniid* etc. with the Indo-European root $*$*ĝenh₁-* could be expained in the light of Jasanoff's (2003: 91–127) theory of '*i*-presents'.[3]

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[2] After stressed $*$*-i-* the following glide became $*$*-đ-* in British Celtic, written <d>, <z> and <th> in Middle Welsh, Middle Breton and Middle Cornish respectively.

[3] I am no longer convinced by my suggested connection with $*$*ĝneh₃-* 'know' (Zair

At first sight, the discrepancy between the length of the vowel in the verb stem between Irish and British is easily resolved by recourse to analogical remodelling in Irish, on the basis of other verbs which did contain an etymological long vowel (on the proportion 3 sg. *$b\bar{a}$-ie-ti > *baid* 'dies': 1pl. *$b\bar{a}$-io-$mosi$ > *bámmi* :: *$gn\breve{i}$-ie-ti > *gniid* : X, where X is *gnímmi* instead of expected ˣ*gnemmi* < *$gn\breve{i}$-io-$mosi$). But such a reconstruction is highly problematic. Firstly, it is difficult to motivate. It is generally agreed that this verb goes back to a root *$\hat{g}enh_1$- 'produce, generate', found very widely in other Indo-European languages (e.g. Greek γίγνομαι 'be born, become', Vedic *jáyate* 'is born', Latin *gignō* 'beget, produce'; *LIV* 163–5). But neither *$\hat{g}enh_1$-ie/o- nor *$\hat{g}\mathring{n}h_1$-ie/o- will give *$gn\breve{i}$-ie/o- directly (*$\hat{g}\mathring{n}h_1$-ie/o- is in fact attested in Celtic in e.g. Old Irish ·*gainedar* 'comes to life, is born'; *$\hat{g}enh_1$-ie/o- would give Old Irish ˣ*geinid*). For this reason SCHU-MACHER (2004: 339–47) supposes that the forms represent a new Proto-Celtic formation; the 'root' *gn- was abstracted from environments where *$\hat{g}\mathring{n}h_1$-C- had given *$\hat{g}n\breve{a}C$-, and a new present *gn-ie/o- was formed. At this stage the Proto-Indo-European rules of syllabification (which would result in *$gnie/o$- > *$ganie/o$-) had been lost, and the result of *$gnie/o$- was *$gn\breve{i}ie/o$-. While such a process is not impossible, it is hard to see why such a formation would have been created: the idea is completely *ad hoc*, and quite unattractive. Some further evidence makes this reconstruction even more difficult: the verbal noun and adjective which go with this verb both point to a long vowel rather than a short vowel. Thus we have a verbal noun *$gn\bar{i}$-mu-, as shown by Old Irish *gním* 'doing', Middle Welsh *gnif* 'labour, toil', and, with the preverbs *$ambi$-$\mathring{u}o$-, Old Breton *imguognim* 'grammatical construction', and an original verbal adjective *$gn\bar{i}$-to-, preserved in the Old Irish 3 sg. preterite passive relative *ro·ngníth*. In the case of neither of these forms is it likely that *$gn\bar{i}$- reflects the original formation. The well-attested category of verbal adjectives in *-to- was formed to the zero grade of the root in Proto-Indo-European, so we would expect to find *$g\mathring{n}h_1$-to- > ˣ*$gn\bar{a}to$- > Old Irish ˣ·*gnáth* (cf. Latin (g)*nātus* 'born', Greek -γνητος in e.g. κασίγνητος 'brother').[4] Verbal nouns in *-mu- are a much less well-attested formation, whose extra-Celtic Indo-European connections are uncertain (SCHUMACHER 2000: 128–9). However, they may also have originally had the root in the zero grade, if Middle Welsh *llif* 'stream, flow' < *$l\bar{i}mu$- < *liH-mu- is anything to go by (the root is *$leiH$-; *LIV* 405–6), in which case we would again expect *$\hat{g}\mathring{n}h_1$-mu- > ˣ*$gn\bar{a}mu$-; but even if they were full-grade, this would have been *$\hat{g}enh_1$-mu-, which would not give *$gn\bar{i}$-mu-.

A possible analogical explanation for the verbal adjective and noun does lie to hand, if we accept that the present stem was *$gn\breve{i}$-ie/o-, by proportional analogy with *liH-e/o- > *-$l\breve{i}$-ie/o- > Middle Welsh *dillyd* (3 sg.) 'flows, floods, pours' (SCHUMACHER 2004: 451–2), whose verbal noun *$l\bar{i}$-mu- we have already

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2009: 218); although the semantic difference is not insurmountable, as I showed, the connection with *$\hat{g}enh_1$- is much closer in meaning.

[4] The development of *$C\mathring{R}HC$- sequences in Celtic is complex: for a discussion and possible solution see ZAIR (2012: 69–89).

seen. We could then posit an analogy $*l\breve{i}$-ie/o- $: l\bar{i}$-mu- $: *l\bar{i}$-to- $:: *gn\breve{i}$-ie/o- $: X :$ Y, where X is $*gn\bar{i}$-mu- and Y is $*gn\bar{i}$-to-.[5] The basis for the influence of $*l\breve{i}$-ie/o- is, however, rather weak: why should a semantically basic and consequently frequent verb like $*gn\breve{i}$-ie/o- 'make, do' be analogically remodelled on the basis of such a marginal verb as $*l\breve{i}$-ie/o- 'flow'? The analogical models could be strengthened by also including $*sneh_1$-ie/o- $\rightarrow *sn\breve{i}$-ie/o- > Middle Welsh *nydu*, Middle Breton *nezaff* 'to spin', which has a verbal noun $*sn\bar{i}$-mu- in Middle Irish *sním* 'twisting, bending, shaping', $*kom$-$sn\bar{i}mu$- > Middle Welsh *kynnif* 'toil, labour, effort' and a verbal adjective $*sn\bar{i}$-to- > Old Irish 3sg. preterite passive rel. *ru·snith*.[6] Since the root is $*sneh_1$- (cf. Greek νῇ 'spins'; *LIV* 571–2),[7] if we assume that the present was $*sneh_1$-ie/o- $> *sn\bar{i}$-ie/o- in Proto-Celtic, it could have generalised the 'root' of the present stem to the verbal noun and adjective (in place of $*s\underset{.}{n}h_1$-mu- and $*s\underset{.}{n}h_1$-to- $> *sn\breve{a}$-mu- and $*sn\breve{a}$-to- respectively), prior to its becoming $*sn\breve{i}$-ie/o- by the same means as envisaged by Schumacher for $*gn\breve{i}$-ie/o-. But the possibility of analogy with $*sn\breve{i}$-ie/o- requires us to extend the same *ad hoc* change of $*sn\bar{i}$-ie/o- to $*sn\breve{i}$-ie/o- as for $*gn\breve{i}$-ie/o-. Furthermore, while an analogical proportion can be mechanically set up in the way just outlined, this does not mean that this is what happened: first we should look to see whether it fits in with other evidence for analogical processes which affected the same linguistic elements in the language, and we should favour explanations which match the general changes affecting the language over *ad hoc* analogical proportions.

It is very clear that remodelling of the verbal noun in $*$-mu- and verbal adjective in $*$-to-, when it took place in Proto-Celtic, was consistently due to paradigmatic levelling. For the verbal nouns, there are few examples where the similarity must be due to remodelling, but it is evident in Middle Welsh *gwaessaf* 'guarantee', Old Irish *fóessam* 'protection' < $*\underset{.}{u}o$-si-$st\breve{a}$-mu-, based on the present stem seen in Old Irish *fo·sissedar* 'protects' < $*\underset{.}{u}o$-si-$st\breve{a}$-ie/o-. In almost all cases of remodelling of the verbal adjective, it has been altered to be identical to the present stem, as shown in the following table.[8]

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[5] The verbal adjective $*l\bar{i}$-to- is not actually attested in Celtic.

[6] The length of the vowel is not marked in the text from which this form is taken, but $*sn\breve{i}$-to- would have given Irish ˣ*ro·sneth* by lowering of short $*$-$\breve{i}$- to $*$-$\breve{e}$- when followed by $*$-o- > $*$-a-.

[7] Acccording to Jasanoff (2003: 110), the root is actually $*sneh_2$- on the basis of Latvian *snāju* 'twist, spin', with all forms pointing to $*sn\bar{e}$- reflecting the strong form $*sn\bar{e}h_2$- of a Narten present. The usual reconstruction will be followed here, but can be replaced by $*sn\bar{e}h_2$- without difficulty.

[8] Forms taken from Schumacher (2004). The derivational history of Old Irish *sennait* (3pl.) 'strike' and *to·sēssa* (3pl. pret. pass.) are too complex for them to be used as evidence (Schumacher 2004: 558–60).

Present stem		Verbal adjective	
Reconstructed	**Attested**[9]	**Expected**	**Attested**[10]
beg-e/o-	*-baig* 'plucks'	**bg̥-to-*	**beg-to-* > *·becht*
gʷed-i̯e/o-	*guidid* 'prays'	**gʷd̥-to-*	**gʷed-to-* > *·gess*
sekʷ-e/o-	*sechid* 'asserts'	**sk̥ʷ-to-*	**sekʷ-to-* > *·secht*
*h₂eĝ-e/o- > **ag-e/o-*	*·aig* 'drives'	**h₂ĝ-to-* > **g-to-*	**ag-to-* > *·acht*
med-e/o-	*midithir* 'judges'	**m̥d-to-* > **am-sto-*	**med-to-* > *·mess*
org-e/o-	*orcaid* 'kills'	**h₃r̥g-to-* > **arg-to-*	**org-to-* > *ortae*
*h₃reĝ-e/o- > **reg-e/o-*	*·raig* 'raises oneself'	**h₃r̥ĝ-to-* > **arg-to-*	**reg-to-* > *-racht*
ret-e/o-	*rethid* 'runs'	**r̥t-to-* > **rit-to-*	**ret-to-* > *-ras*
u̯edʰ-e/o-	*fedid* 'brings'	**ud-to-*	**u̯ed-to-* > *-s*[11]
u̯eg-i̯e/o-	*·figther* 'is woven'	**ug-to-*	**u̯eg-to-* > *·fecht*
u̯et-e/o-	*fethid* 'goes'	**ut-to-*	**u̯et-to-* > *-s*[12]
aneg-e/o-[13]	*aingid* 'saves'		**aneg-to-* > *anachtæ*
*dm̥h₂-i̯e/o- > **dam-i̯e/o-*	*·daim* 'endures'	**dm̥h₂-to-* > **dmă-to-*	**dam-to-* > *·dét*
*h₃lm̥H-i̯e/o- > **lam-i̯e/o-*	*·laimethar* 'dares'	**h₃lm̥H-to-* > **lmă-to-*	**lam-to-* > *·lēt*
*pr̥k-ske/o- > **ark-e/o-*	Middle Welsh *archaf* 'ask'	**pr̥k-to-* > **rik-to-*	**ark-to-* → **ark-ī-to-* > Middle Welsh *erchit* (impersonal)
*h₁ed- > **ed-*	*estir* 'eats' (subjunctive)[14]	**h₁d-to-* > **d-to-*	**ed-to-* > *-es*
*semH-e/o- > **sem-e/o-* <	*do·essim* 'sheds'	**sm̥H-to-* > **smă-to-*	**sem-to-* > *-set*[15]

9 Old Irish, unless otherwise specified.

10 Old Irish 3 sg. preterite passive, unless otherwise specified.

11 In 3 sg. relative pret. pass. *nad·n-airchós* < **ari-kom-u̯ed-to-*.

12 In 3 sg. pret. pass. *do·cúas*.

13 The prehistory of this verb is complex. It was originally probably a compound, and as such would not have had a verbal adjective (Schumacher 2004: 198-200).

14 The verb 'to eat' formed a Narten present **h₁ĕd-* (LIV 230). The lengthened grade in the strong forms is apparently reflected, with some remodelling, in Old Irish *ithid* 'eats' (Schumacher 2004: 377-80).

15 From **sam-to-* according to Schumacher (2004: 569-70). But **sem-to-* would give the same result (McCone 1996: 55-8, 64-5, 106-7, 112).

The only exception to this principle is in a small group of verbal adjectives, associated with verbs whose synchronic roots were of the shape *$CeL(C)$-, where the relationship between the present stem and the verbal adjective is no longer clear due to the different developments of laryngeals in different environments. The examples consist of 3 sg. preterite passive Old Irish *fo·cress* < *$krid$-to- < *$kr̥d$-to- for expected *$krǎ$-to- < *$kr̥H$-to-, based on the present stem *$kerd$- in Old Irish *fo·ceirt* 'throws' < *$kerd$-e/o- < *$kerH$-$dʰh_1$-e/o- (SCHUMACHER 2004: 401–3); *mli-to- < *$ml̥$-to- (← *$mlǎto$- < *$ml̥h_2$-to-) in pret. pass *fo·rro·mled* to Old Irish *melid* 'grinds' < *mel-e/o-; and *ro·sreth* < *$stri$-to- (← *$strǎto$- < *$str̥h_3$-to-) to Old Irish *sernait* (3pl.) 'strew' < *$ster$-na-. The model is *$bʰr̥$-to- > *bri-to- > ·*breth* beside *$bʰer$-e/o- > Old Irish *beirid* 'bears'. This remodelling may have taken place only in Irish: the original past participle of *$str̥h_3$-to-, *$strǎto$-, was substantivised, and preserved as Old Irish *srath* 'grass, sward, valley', Middle Welsh *ystrad* 'valley, vale, plain', Middle Breton *strat* 'bottom, vale', and the full grade root in *$ster$-na- on which the remodelling is based seems to be a secondary Irish development, the original zero grade being preserved in Middle Welsh *gwassarnu* 'to strew straw etc. under beasts' < *$u̯o$-$starna$- < *-$str̥$-n-h_3- (SCHUMACHER 2004: 42–5, 601–3). The same is true of Old Irish *melid*, since the zero grade is found in Middle Welsh *malu* 'to grind' < *mal-e/o- < *$ml̥h_2$-e/o- (SCHUMACHER 2004: 470–2).

Whether or not the second type of remodelling is late, it clearly only affected a particular group of roots of a particular shape. In all other cases, where a verbal adjective has been remodelled, its 'root' becomes identical to that of the present stem. It is likely that, in cases where zero grade in the verbal adjective resulted in sequences of *CC-to-, where both consonants were plosives and hence unsyllabifiable, an *e*-grade had already been introduced in Proto-Indo-European itself: this will explain the correspondence between the root of the present and the verbal adjective in forms like *$gʷed$-e/o- ~ *$gʷed$-to- (KURYŁOWICZ 1968: 210). However, no such process applied in cases where the root contained a sonorant (or probably fricative), and the analogical remodelling after the verb in these cases, which make up the great majority of the above table, must have been a Proto-Celtic development. This having been established, given that neither *$gnī$-mu- nor *$gnī$-to- can come regularly from zero grade formations, it follows that the most parsimonious explanation is that they underwent the same type of remodelling that affected the other verbal nouns and adjectives: that is, they were remodelled on the basis of the verb. Therefore, the verbal noun *$gnī$-mu- and verbal adjective *$gnī$-to-, rather than being explained by setting up a proportional analogy, are far more likely to have generalised the 'root' of the present stem, which should therefore be reconstructed as *$gnī$-$i̯e/o$- in Proto-Celtic rather than *$gnĭ$-$i̯e/o$-, whose appearance in Brittonic must be secondary.[16] It must be admitted that the cause of this shortening is still

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[16] Another possible indirect piece of evidence for a stem *$gnī$-$i̯e/o$- is found in the Middle Welsh verbal noun *gwniaw* and Middle Breton verbal noun *gruyat* 'sew'. These may

somewhat mysterious. Shortening in hiatus in British seems to be ruled out (Griffith 2009: 157–8). I have earlier argued that in British the frequency of *$b\breve{\iota}$-$\underset{\circ}{\iota}e$/o- > Middle Welsh *byd* 'is', where the short vowel is in fact regular, alongside the marginal *$l\breve{\iota}$-$\underset{\circ}{\iota}e$/o-, may have led to the shortening (Zair 2009: 218), but I must admit that a direct analogical proportion cannot be drawn up.

The only plausible explanation for a present stem *$gn\bar{\iota}$-$\underset{\circ}{\iota}e$/o- is to reconstruct *$\hat{g}neh_1$-$\underset{\circ}{\iota}e$/o-, which would give *$gn\bar{e}$-$\underset{\circ}{\iota}e$/o- and then *$gn\bar{\iota}$-$\underset{\circ}{\iota}e$/o-, since *-$\bar{e}$- became *-$\bar{\iota}$- in Proto-Celtic.[17] This reconstruction appears to be undermined by the fact that it involves an apparently unmotivated *Schwebeablaut*: when in the full grade this root normally has full grade I, as demonstrated by forms like Latin *gens* 'family', Greek γένεσις 'birth' < *$\hat{g}enh_1$-*ti*-. But in this regard *$\hat{g}neh_1$-$\underset{\circ}{\iota}e$/o- matches strikingly well with the behaviour of a class of '*i*-presents' posited for Proto-Indo-European by Jasanoff (2003: 91–127).[18] According to Jasanoff, *i*-presents were formed only to roots ending in a laryngeal, and the root was always in full grade II, even when normally in full grade I. Except in Hittite the *i*-presents were thematised, falling together with *-$\underset{\circ}{\iota}e$/o- presents. Due to this development, most of the evidence presented by Jasanoff for this type of formation comes from Hittite, and in fact, the forms which show full grade II instead of full grade I in the other languages are rather limited, and their explanation not at all straightforward. Jasanoff uses as evidence verbs in Vedic and Greek which show problematic short vowels, such as Vedic *hváyati* 'calls', which he reconstructs as coming from *$\hat{g}^h\underset{\circ}{u}eH$-$\underset{\circ}{\iota}e$/o-, and Greek δράω 'perform' < *$dreh_2$-$\underset{\circ}{\iota}e$/o-. This development is explained by Jasanoff by means of the so-called '-AHIHA- rule', an Indo-European rule whereby in a sequence vowel – laryngeal – high vowel – laryngeal – vowel, the first laryngeal was lost by dissimilation. Jasanoff sees his *i*-presents as having endings belonging to the '*hi*-conjugation' of Hittite, which have a 1sg. in *-h_2e. Consequently, in a form like *$\hat{g}^h\underset{\circ}{u}eH$-*i*-$h_2e$, the first laryngeal was lost by the -AHIHA- rule, resulting in a short vowel which could be generalised through the paradigm. A major part of this scenario is the very doubtful -AHIHA- rule,[19] and it is also not completely certain that the roots

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be the result of contamination of the root *$\underset{\circ}{u}er\hat{g}$- with *$gn\bar{\iota}$-$\underset{\circ}{\iota}e$/o-, with the long vowel in the root being demonstrated by the [i] represented by Welsh <i> and Breton <y> (Schumacher 2004: 346, who explains the long vowel as being an allomorph resulting from the development of *-$\underset{\circ}{\iota}\underset{\circ}{\iota}V$- to [iV] in British in pre-pretonic position).

[17] The analogical explanation proposed by *LIV* (164, fn.21) is highly implausible.

[18] Note that Jasanoff's proposed theory of *i*-presents is quite different from that of Schrijver (2003).

[19] Apart from the forms under discussion, the only evidence for the -AHIHA- rule which is put forward by Jasanoff is a derivation, attributed to Jochem Schindler, of the respective Vedic and Slavic $\bar{a}$-stem instrumental singulars -$ay\bar{a}$ and -$oj\rho$ from *-eh_2-ih_2-eh_1, consisting of the instrumental ending added to the stem formants of both the *devī*-stems and the $\bar{a}$-stems. It is not clear why only the instrumental singular of the $\bar{a}$-stems should have undergone the addition of the *devī*-stem formant, and further evidence would be welcomed before accepting this rule.

adduced by Jasanoff are intrinsically full grade I. For the root reconstructed by Jasanoff as $*\hat{g}^h euH$-, the earliest Vedic evidence *hávate* 'summons' suggests full grade I, but *LIV* (180–81) prefers $*\hat{g}^h \mu eH$-, on the basis of forms like Young Avestan *zbātar-* 'caller'. For δράω, *LIV* (127) reconstructs $*dreh_2$-, and indeed there seems to be no comparative evidence to decide in favour of either $*derh_2$- or $*dreh_2$-. A better example, in that it shows the expected long vowel from a sequence $*\underset{\circ}{u}\underset{\circ}{i}eh_1$-$\underset{\circ}{i}e/o$-, is perhaps Latin *uiēre* 'weave together', whose full grade I is demonstrated by Lithuanian *vejù* 'wind' < $*\underset{\circ}{u}e\underset{\circ}{i}h_1$-$e/o$-, Gothic *waddjus* 'wall' < $*\underset{\circ}{u}o\underset{\circ}{i}h_1$-$u$-.[20] According to Jasanoff, the long vowel here reflects the expected result of e.g. the 3 sg. $*\underset{\circ}{u}\underset{\circ}{i}eh_1$-$\underset{\circ}{i}$-$e$, in which the laryngeal was not lost, resulting in a long vowel, which was generalised in Latin *uiēre*.

Even if one accepts the existence of Indo-European *i*-presents in the form envisaged by Jasanoff, there remain certain difficulties with his proposal. It is also clearly the case that by no means all roots ending in a laryngeal which form *i̯e/o*-presents can be traced back to an *i*-present of this sort: cf. $*h_2 erh_3$-*i̯e/o*- 'plough', which is certainly old, being attested in Middle Irish *airid*, Greek ἀρόω, Latin *arō*, Old High German *erien*, Lithuanian *árti*, Old Church Slavonic *orati* 'plough' (*LIV* 272–3), but has full grade I rather than II.[21] Nonetheless, even if one does not accept the whole edifice built by Jasanoff it does seem that at the very least he has identified a particular class of *i̯e/o*-presents to roots ending in a laryngeal, and there is a suggestive possibility that they may appear exceptionally in full grade II. In light of this possibility, Proto-Celtic $*gn\bar{\imath}$-*i̯e/o*- < $*\hat{g}neh_1$-*i̯e/o*- seems a very strong supporting example, not suggested by Jasanoff himself.[22] It is, moreover, not the only one. Old Irish *do·slí* 'deserves,

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[20] Jasanoff does not address the Vedic thematic aorist *ávyat* 'wrapped', which is taken by *LIV* (695) to prove a full grade I $*\underset{\circ}{u}ieh_1$-. Presumably he would see the sequence *vy-* as analogical on the present *vyáyati*, which comes, according to him, from $*\underset{\circ}{u}ieh_1$-$i$-$h_2 e$.

[21] Although if Hittite *ḫarrai* 'grinds, splinters, crushes' belongs here, as suggested by Kloekhorst (2008: 300–301), which is not an *i*-present, it may suggest that the $*ie/o$-present in 'core' Indo-European is a secondary development.

[22] It should be noted that *gniid* < $*\hat{g}neh_1$-*i̯e/o*- is entirely compatible with the existence of $*\hat{g}\underset{\circ}{n}h_1$-*i̯e/o*- in Old Irish *·gainedar* 'comes to life, is born', Vedic *jáyate* 'is born': Jasanoff sees '*i*-presents' as having full grade in the root in strong parts of the paradigm (1–3 sg.) and zero grade in the weak parts (1–3 pl.). Since the medio-passive in Indo-European normally shares the same ablaut grade as the weak active stem, $*\hat{g}neh_1$-*i̯e/o*- (active) and $*\hat{g}\underset{\circ}{n}h_1$-*i̯e/o*- (medio-passive) is exactly the pattern one would expect. It looks as though Celtic has uniquely preserved a very old pattern. Originally, as noted by Schumacher (2004: 342–4), there would only have been a single paradigm of non-present parts of the verb built to $*\hat{g}enh_1$-, but as a result of the very different present stems which developed from active $*\hat{g}neh_1$-*i̯e/o*- and medio-passive $*\hat{g}\underset{\circ}{n}h_1$-*i̯e/o*-, paradigm split occurred, with $*gn\bar{\imath}$-*i̯e/o*- forming an entirely new paradigm. This was mostly based on analogy with $*sn\bar{\imath}$-*i̯e/o*-, but in Irish the subjunctive stem $*gne$-, as found in Old Irish 3pl. rel. *gnete*, is based on that of the verb 'to be', as in 3 sg. *beith*. This development at least must have taken place in a fairly late stage of primitive Irish, after shortening in hiatus, since before this $*b\underset{\smile}{\imath}i$-$e/o$- and $*gn\bar{\imath}$-*i̯e/o*- had different vowel

merits, earns' < **tu-slī-i̯e/o-*, Middle Welsh *derllyd* (3 sg.), Middle Breton *dellez* (3 sg.) 'deserves' < **tu-ari-slĭ-i̯e/o-* shows the same pattern of long vowel in Irish and short vowel in Brittonic as **gnī-i̯e/o-*. It is generally agreed that it is to be assigned to the root **selh₁-* 'take' (*LIV* 529; SCHUMACHER 2004: 588–91), but just as with *gniid*, it seems to be in an unexpected and unexplained full grade II **sleh₁-*.[23] Although, unlike as for *gniid*, we do not have the supporting evidence of a verbal noun or verbal adjective conclusively demonstrating the root **slī-*, the similarity of the root shape and the pattern of long vowel in Irish to short vowel in British mean that we can confidently reconstruct **sleh₁-i̯e/o-*, with the Jasanoff-style full grade II. A probable case is Old Irish *ro·lá* 'throws, places, puts' < **lā-i̯e/o-*, which belongs better with Greek ἐλάω 'drive' (McCONE 1991: 33; *LIV* 235), than with Latin *lētum* 'death', Hittite *laizzi* 'lets' (SCHUMACHER 2004: 442–6), so should be reconstructed as **h₁leh₂-i̯e/o-* rather than **lh₁-i̯e/o-*.[24]

Another possible, but inconclusive, example is found in the verbal adjective **u̯rī-to-* in the Gaulish personal name *Ateuritus* and in Old Irish *fo·fríth* 'has been found', to which no present stem is found, since the verb has a suppletive present in Old Irish *fo·gaib* 'finds'. However, since the adjective should have been **u̯r̥h₁-to-*, it must, as already established, have been analogically remodelled on a present which began **u̯rī-*. The root is reconstructed by *LIV* as **u̯reh₁-* (*LIV* 698), though the only evidence it presents for the full grade II is Celtic **u̯rī-to-* itself, which it traces back to **u̯reh₁-to-*. Since this could have been analogical on an 'i-present' **u̯reh₁-i̯e/o-* with secondary full grade II, it does not provide any evidence for the original position of the vowel in the root. Nor do any other verbs which come directly from this root seem to show a clear full grade **u̯reh₁-* : reduplicated aorists with zero grade of the root are found in Old Avestan, Greek and perhaps Celtic, a nasal present **u̯r̥-ne-h₁-* in Old Avestan (*LIV* 698; KÜMMEL 2015 s.v. **u̯reh₁-*). The Oscan future perfect ϝουρουστ '(s)he will find' (McDONALD & ZAIR 2012 [2013]) could go back directly to an old perfect **u̯e-u̯roh₁-*, but the future perfect suffix **-ōs-* is productive, so could have been added to the reduplicated aorist **u̯e-u̯r̥h₁-e/o-* also found in Greek and Avestan (on the origin of the Sabellic future perfect see ZAIR 2014). The Greek perfect εὕρηκα reflects the zero grade **u̯e-u̯r̥h₁-* before a consonant. Apart from Proto-Celtic **u̯rī-to-*, the evidence for a full grade **u̯reh₁-* comes from apparently 'extended' forms of the root. Thus we find possible **u̯reh₁-t-* in e.g. Old Church Slavonic *ob-rětъ* 'I found'. A more complicated case is that of the Baltic words for 'find' as exemplified by Lithuanian *ródyti* 'show' (originally a causative, 'cause to

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lengths in their root (ZAIR 2009). In British Celtic, the non-present parts of the verb are largely replaced by reflexes of the root **u̯erĝ-* 'make, do' (SCHUMACHER 2004: 707–11); the Middle Cornish 3 sg. preterite *dynythys* 'created, produced' is simply created by adding the preterite suffix *-ys-* to the present stem *dynyth* < **dī-gni-i̯e/o-*.

[23] For full grade I of this root cf. Greek εἷλον (aor.) 'took' < **e-selh₁-o-m*, Gothic *saljan* 'offer' < **solh₁-eye/o-*, Old Irish *selb* 'property', Middle Welsh *helw*, *elw* 'profit' < **selh₁-weh₂*.

[24] For the full grade I, cf. Armenian *eli* 'went up, went out'.

find'). According to Klingenschmitt (1978: 6–7), the creation of Proto-Baltic
*$r\bar{a}d\bar{\imath}$- lying behind *ródyti* is analogical on the normal pattern of *e*-grade verb
roots corresponding to *o*-grade causatives (> *-e- and *-a- in Proto-Baltic): the
*-$\bar{a}$- of *ródyti* is based on an extension of this pattern to roots with *-$\bar{e}$- < *-eh_1-,
so that *-$\bar{e}$- in the rest of the verb corresponds to *-$\bar{a}$- in the causative, in place
of regular *-$\bar{o}$- < *-oh_1-. It follows that beside *ródyti* there must have been a full
grade verb root *$r\bar{e}d$- < *$\underset{\smile}{u}reh_1$-$d^{(h)}$-. This Baltic evidence is simply too indirect to
be relied on for the existence of full grade II *$\underset{\smile}{u}reh_1$- as the underlying state of
this root, and the *-t- found in Slavic is by no means a commonplace extension
to a verb root, which leads *LIV* (501) to reconstruct an entirely separate root
*reh_1t- for the Slavic forms. Even if both the Slavic and Baltic forms are derived
from the root being discussed here, and point to *$\underset{\smile}{u}reh_1$-$t$- and *$\underset{\smile}{u}reh_1$-$d^{(h)}$-, it
is possible that the extensions themselves caused the root to be in full grade
II. In short there seems no strong evidence in favour of *$\underset{\smile}{u}reh_1$- rather than
*$\underset{\smile}{u}erh_1$- as the underlying full grade of this root. Conversely, there is a piece of
evidence which seems to point to *$\underset{\smile}{u}erh_1$-, which is Armenian *gerem*, usually
translated as 'take prisoner'.[25] However, Praust (2005), has argued that *gerem*
really means 'lead away', and derives the verb from the root *$\underset{\smile}{u}ed^h$-, as seen in
e.g. Lithuanian *vedù* 'lead' (*LIV* 659). The semantics certainly seem plausible;
the etymology relies on the Armenian sound change *-d^h- > -*r*- word-medially,
the correctness of which I am not equipped to judge. This etymology has been
accepted by Kümmel (2015, s.v.v. *$\underset{\smile}{u}ed^h$-, *$\underset{\smile}{u}reh_1$-). Consequently, it is not possible
to say whether the root is underlyingly *$\underset{\smile}{u}erh_1$- or *$\underset{\smile}{u}reh_1$-; if it were the former,
Proto-Celtic *$\underset{\smile}{u}r\bar{\imath}$-$to$- would support the reconstruction of a - subsequently lost
- present *$\underset{\smile}{u}r\bar{\imath}$-$\underset{\smile}{\imath}e/o$-, going back to an original i-present *$\underset{\smile}{u}reh_1$-$\underset{\smile}{\imath}e/o$-.

   To conclude: examination of the relationship between the verbal noun and
adjective and the verb stem in Proto-Celtic shows that the underlying long
vowel found in Old Irish *gniid* 'makes, does', is the most reliable reflection of
the Proto-Celtic situation, and we can consequently reconstruct a present stem
*$gn\bar{\imath}$-$\underset{\smile}{\imath}e/o$-, which can only go back to *$\hat{g}neh_1$-$\underset{\smile}{\imath}e/o$-. The unexpected full grade II of
the root corresponds to the *Schwebeablaut* identified by Jasanoff as a feature of
his hypothesised Proto-Indo-European i-presents - and *gniid*, and perhaps some
other Celtic verbs of the same type, provides a rather more straightforward
instance than most of the cases suggested by him in Vedic and Greek.

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[25] The full grade I is assumed to be secondary by *LIV*.

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