

Basque as an Indo-European Language

—

A Step-by-Step Introduction

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Abstract

This paper is intended for scholars who would like to evaluate the theory that Basque ultimately derives from Indo-European, but find published evidence on this subject either too complex (my JIES paper) or too terse (my self-published dictionary).

This paper therefore provides a linear, step-by-step introduction to this theory, in four stages:

1. an overview of Pre-Basque, as reconstructed by Michelena and Trask;
2. a gradual illustration of the most secure Indo-European etymologies of Pre-Basque basic lexicon (with intermediate lists of corresponding sound laws);
3. a list of less obvious etymologies;
4. a summary of sound laws.

This linear organization of the subject matter should enable scholars to evaluate the theory in a matter of hours, without going through the painstaking details, cross-references and revisions in the JIES paper.

Introduction

Goals and origin of this paper

My research on Basque as an Indo-European language is scattered across multiple sources, including:

1. a discussion paper: “Evidence for Basque as an Indo-European Language”, in *The Journal of Indo-European Studies*, Volume 41, Numbers 1 & 2, Spring/Summer 2013, pages 39-180;
2. my “Reply to the critics”, *ibidem*, pages 268-310, where I replied to several authors’ comments to the discussion paper;
3. an updated version of sound laws linking Proto-Indo-European to Michelena’s reconstructed Pre-Basque: “Evidence for Basque as an Indo-European Language - Addenda et corrigenda to sound laws”, published online in Academia.edu;
4. a dictionary: “A First Etymological Dictionary of Basque as an Indo-European Language: Basque Native, Basic Lexicon”, CreateSpace Independent Publishing Platform (May 17, 2014), ISBN 978-1499595468.

Each of these sources has its advantages as well as its shortcomings: the JIES paper was published in a widespread, authoritative journal and is full of detailed discussions, quantitative analyses and cross-references, but is also long and hard to read; on the other hand, the dictionary is self-published and presents detailed etymologies in alphabetical order, but only has a very terse introduction on how Proto-Indo-European and Basque are related. Additionally, several etymologies and sound laws underwent minor or major changes across these sources.

Scholars wishing to evaluate my theory are therefore confronted with two unpalatable alternatives: either they should embark in a weeks-long analysis of the JIES paper, or they should make do with the very terse introduction in my dictionary, which does not explain how I gradually built up my theory.

The present paper aims at bridging this gap between the too-detailed JIES paper and the too-terse dictionary, by gradually illustrating how one can reach the conclusion that most of Basque native basic lexicon derives from Proto-Indo-European.

Readers of the present paper should thus be able to understand the basics of my theory in a few hours and consequently make up their minds as to whether it makes sense (at least partially) or not.

The paper is not, however, designed to replace either the JIES paper or the dictionary: both remain invaluable sources of details which are not included in the present paper.

Acronyms

Basque dialects and variants:

A	Aezkoan Basque
B	Bizkaian Basque
c	common Basque
G	Gipuzkoan Basque
HN	High Navarrese Basque
L	Lapur dian Basque
LN	Low Navarrese Basque
R	Roncalese Basque
S	Salazarese Basque
Sout	Southern dialect of Alava
Z	Zuberoan Basque

Other acronyms:

adj.	adjective
C	any consonant
fem.	feminine
IE	Indo-European
masc.	masculine
n.	noun
PIE	Proto-Indo-European
V	any vowel

For bibliographical acronyms, see next section.

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Pre-Basque: the starting point

Based on dialect variations, other internal evidence, and phonological treatment of loans, Michelena and Trask (MICH, T, T-E) reconstructed so-called **Pre-Basque**, i.e. the phonology of Basque around two thousand years before present.

Pre-Basque is an excellent starting point for any historical linguist investigating the affiliation of Basque to other language families, because it:

- filters out any terms that have already been recognized as loans, and only reconstructs *native* Basque terms;
- provides an accurate segmentation of Basque lexical items, based on internal evidence;
- identifies the common sources of current dialectal variations;
- provides a standardized inventory of phonemes and phonotactic rules;
- is not based on any assumption about external affiliations of Basque.

As Pre-Basque is largely accepted as a valid reconstruction by Vasconists, it is the starting point for the Indo-European etymologies proposed in this paper.

The phonemic inventory reconstructed for Pre-Basque is the following (see T, chapter 3, for details):

Fortes	(-p-)	-t-	-k-	-tz- -tz	-ts- -ts	-nn- -nn	-ll- -ll	-rr- -rr
Lenes	b- -b-	(d-) -d-	g- -g-	z- -z-	s- -s-	n- -n-	l- -l-	r-
Vowels	i	e	a	o	u			

(marginal phonemes are within brackets)

Lenes never occurred word-finally. Fortes¹ never occurred word-initially (and plosive fortes never occurred word-finally, either).

Pre-Basque (like Basque) has two lenes and two fortes sibilants: <s> and <ts> are apico-alveolar, whereas <z> and <tz> are lamino-alveolar.

Pre-Basque had **no** */m/ phoneme at all.

Trask (T 128, 133-136, 172-176, 180-183) reconstructs that **no word in Pre-Basque could begin with any of /p, t, k, d/ or /m/**, and illustrates Martinet's hypothesis that, before Pre-Basque, words could begin with /ph, th, kh/, which later weakened to /h/ and were eventually lost.

Also note that that ***h was not phonemic** in Pre-Basque, and is therefore conventionally represented as *[h].

Finally, Pre-Basque had no word-initial consonant clusters (T 127).

For a detailed description of sound laws linking Pre-Basque to Basque, see T (chapter 3) and T-E (pages 25 to 38). The most notable sound changes from Pre-Basque to Basque can be summarized as follows:

- loss of intervocalic *n: *VnV > VV
- rhotacism of intervocalic *l: *VlV > VrV
- fluctuation of intervocalic **d** and **r** ([r])
- *bVn- > mVn-
- *bo- > o-

¹ Fortes consonants can be conventionally represented either by capital letters or by geminates. This paper will adopt the latter convention.

Structure of each etymology

All etymologies in this paper have the same structure:

modern Basque term; dialect variants are followed by the acronym of the dialect (see acronym list);

English **translation** of the Basque term;

Pre-Basque reconstruction, when available (source: T and/or T-E); in the rare cases where my sound laws lead to a Pre-Basque reconstruction different from Trask's, Trask's reconstruction is presented first, followed by my own reconstruction (preceded by "*recte*");

Proto-Basque reconstruction (an intermediate stage between PIE and Pre-Basque);

Proto-Indo-European ("PIE") reconstruction (preceded by a question mark if the PIE etymology is doubtful);

Proto-Celtic reconstruction (if applicable);

Celtic cognates (if applicable);

other IE cognates;

optional **comments** about the etymology, incl. intermediate forms between PIE and Pre-Basque (when this is useful to make the phonetic evolution explicit);

sources of the Basque term, its Pre-Basque reconstruction, PIE reconstruction and IE cognates, followed by a reference to etymology number in JIES and page number in DICT (see source acronyms in the bibliography section).

All **Greek** words are transliterated.

For **Hittite**, the following conventions are used:

What is usually written as follows by Hittitologists will be written as follows in this paper:
ī	y
ū	w
ḫ	h
š	s

The following conventions will be used for PIE phonemes:

- three laryngeals² will be used, namely ***h₁**, ***h₂**, ***h₃**, while ***h_x** will represent a laryngeal of unknown type (sometimes written as ***H** by other authors);
- semivowels will be written as ***w** and ***y**, while some authors use ***u** (or ***u**) and ***i** (or ***i**);
- aspirates will be represented as ***C^h** (e.g. ***d^h**), labials as ***C^w** (e.g. ***k^w**) and palatals as ***ġ**, ***ĵ**, etc.

² so, for the sake of uniformity, M-A's ***h₂**, ***h₄** and ***h_a** (= ***h_{2/4}**) will all be "normalized" to ***h₂**

The core evidence

This section is a step-by-step introduction to the discovery that Basque is an IE language. Each subsection illustrates Basque-IE etymologies of increasing complexity and includes a summary of sound laws underlying such etymologies.

The low-hanging fruit: straightforward etymologies

The following native Basque terms have straightforward phonetic and semantic IE correspondences.

1. **argi**

'bright (adj.); light (n.)'

PRE-BASQUE: ***argi** 'bright (adj.), light (n.)'

PROTO-BASQUE: ***argi**

PIE: ***h₂erǵ-i-** 'bright, white'

PROTO-CELTIC: ***argyo-** 'white'

OTHER IE LANGUAGES: Hittite **harki-** 'bright, white'; Tocharian A **ārki** 'white'

COMMENT: T-E 104 and T 369 explain why this cannot be a loan from another IE language.

SOURCES: T 161, 175, 210, 262, 312, 369; T-E 19, 104, 385, 391; M-A 482; M 41; AD 49; K 307; IEW 64; JIES #6; DICT 28

2. **ebri** (LN Z), **ebi** (G), **ébi** (Z), **huri** (c), **eudi** (G), **eü(r)i** (Z), **uri** (HN L LN)

'rain (n.)'

PRE-BASQUE: ***huri** (*recte* ***ebri**) 'rain'

PROTO-BASQUE: ***enbri**

PIE: ***ṇbh-ro/i-** 'rain'

OTHER IE LANGUAGES: Latin **imber** 'rain', Sanskrit **abhrá-** 'rain-cloud', Avestan **aβra-** 'rain'

COMMENT: ***ṇbhri-** > ***enbri** > **ebri**.

SOURCES: T 312; T-E 19, 28, 185, 388, 392; M-A 126; V 299; IEW 315f; JIES #31; DICT 68

3. **ur** (c excl. Z), **hur** (Z)

'water'

PRE-BASQUE: ***ur** 'water'

PROTO-BASQUE: ***ur**

PIE: ***u(e)h₁r** 'water, rain'

OTHER IE LANGUAGES: Cuneiform Luwian **wār** 'water', Sanskrit **vár-** 'water', Latin **ūrīnārī** 'to dive', Old Norse **úr** 'drizzling rain'

SOURCES: T 144, 178, 314; T-E 20, 357, 389, 394; M-A 125-126; M 424; V 464; KR 562; IEW 80f; JIES #80; DICT 127

4. **negu**

'winter'

PRE-BASQUE: ***negu** 'winter'

PROTO-BASQUE: ***negu-**

PIE: ***sneig^{wh}-(e/o-)** 'to snow'

PROTO-CELTIC: ***snig^w-(y)o-** 'to snow', ***snig^wyā** 'snow'

CELTIC: Old Irish **snige** 'snow', Middle Welsh **nyf** 'snow'

OTHER IE LANGUAGES: Latin **nix** 'snow' (< ***snik-s**), Greek **neíphei** 'it snows', Russian **sneg** 'snow', English **snow**

COMMENT: semantically straightforward ('snow' > 'winter'), with an early simplification of PIE ***sn-** > **n-** (as in Breton, Welsh, Cornish, Latin, Greek, etc.): ***sneig^{wh}-o-** > ***neigu-** > **negu**.

SOURCES: T 177, 282; T-E 296, 390, 393; M-A 126; M 349; V 409; B 1003; DERK 457; KR 460; IEW 974; LIV 573; JIES #225; DICT 107

5. **zorri**

'louse'

PRE-BASQUE: ***zorri** 'louse'

PROTO-BASQUE: ***sorw-**

PIE: ***swer-** 'wound' > ***swor-o-**

PROTO-CELTIC: ***sworo-** 'louse'

CELTIC: Middle Irish **sor** 'louse'

COMMENT: ***swor-** > ***sorw⁻³** > **zorr-**, plus **-i** ending found in several animal names⁴.

SOURCES: T 144, 300; T-E 19, 378, 387, 394; M 365; IEW 1050; LIV 613; JIES #83; DICT 136

6. **eseri**

'to sit down'

PRE-BASQUE: *N/A* (*recte* ***-sed-**)

PROTO-BASQUE: ***sed-**

PIE: ***sed-** 'to sit (down)'

PROTO-CELTIC: ***sed-o-** 'sit'

CELTIC: Old Irish **saidid** 'sit'

OTHER IE LANGUAGES: Latin **sedeō** 'to sit', Gothic **sitan** 'to sit', English **sit**

COMMENT: **e-...-i** is a very common circumfix for perfective participles (the citation form of Basque verbs), so the verb stem is **-ser-** < ***-sed-**, with common rhotacism of intervocalic ***-d-** (see P17 in T-E 28).

SOURCES: T 178; T-E 28, 181; M-A 296; M 325; V 551; KR 434; IEW 884f; LIV 513f; JIES #212; DICT 64

³ with the same metathesis (***swVr-** > ***sVrw-**) as in **esan**, **erran** 'to say' (otherwise ***sw-** would yield ****b-**: see below)

⁴ e.g. **ahari** 'ram', **ardi** 'sheep', **behi** 'cow', **euli** 'fly', **txori** 'bird'

7. egin

'to do, to make'

PRE-BASQUE: ***-gin-** 'make, do'

PROTO-BASQUE: ***-gin-**

PIE: ***ĝenh₁-** 'to beget'

PROTO-CELTIC: ***gn-iyō-** 'to do'

CELTIC: Old Irish **gn-**, **gen-** 'to do', Middle Cornish **gonis** 'to work'

OTHER IE LANGUAGES: Sanskrit **jan-** 'to be born, produce, create'; Latin **gignō** 'to create, engender'

COMMENT: same semantic shift as in Celtic.

SOURCES: T 103, 178; T-E 32, 46, 163, 387, 393; M-A 188; M 163; V 260; IEW 373f; LIV 163f; JIES #22; DICT 52

8. ikusi (B G HN LN), ikhusi (L LN), ikhúsi (Z), inkusi (old LN), ekosi (B), ekusi (B G R), ukusi (B)

'to see'

PRE-BASQUE: ***-kus-** (*recte* ***-ikus-**)

PROTO-BASQUE: ***ad-kuis-**

PIE: ***k_wei-s-** 'to perceive' > ***h₂ed-k_weis-**

PROTO-CELTIC: ***ad-k_wis-o-** 'to see'

CELTIC: Old Irish **ad-cí** 'sees'

OTHER IE LANGUAGES: Latin **cūrāre** 'to watch over, take care of'

SOURCES: T 102, 137, 150; T-E 32, 159, 221, 388, 393; M-A 327; M 25, 180; V 156; IEW 637; LIV 381f; JIES #51; DICT 83

9. eta, ta

'and'

PRE-BASQUE: ***eta**

PROTO-BASQUE: ***etV**

PIE: ***h₁eti** 'also, still, beyond'

PROTO-CELTIC: ***eti** 'yet, still, but'

CELTIC: Gaulish **eti** 'yet, still, but', Gaulish **eti-c** 'and', Old Breton **et-** 'yet, still, but'

OTHER IE LANGUAGES: Latin **et** 'and', Greek **éti** 'also'

SOURCES: T-E 183, 385, 392; M 119; V 195; B 476; IEW 344; JIES #29; DICT 65

10. ala

'or'

PRE-BASQUE: ***alla** 'or'

PROTO-BASQUE: ***alno-** 'other'

PIE: ***h₂el-** 'other' > ***h₂el-yō-**, ***h₂el-no-**, ***h₂el-tero-**

PROTO-CELTIC: ***alyo-** 'other'

CELTIC: Old Irish **aile** 'other', Middle Welsh **all-** 'other'

OTHER IE LANGUAGES: English **else**, Greek **állos** 'other', Latin **alius** 'other', Tocharian B **allek** 'other' (< *h₂el-no-)

COMMENT: Since *-ly- usually yields -rr-, Basque **ala** cannot derive from *h₂el-yo-, but it can regularly be derived from *h₂el-no- > *alno- > *allo-, with straightforward semantics: 'other' > 'otherwise' > 'or', as e.g. in English **else** (from the same PIE root).

SOURCES: T-E 85, 388, 391; M-A 318; M 31; V 34; B 72; KR 23; MART 57; AD 28-29; IEW 24f; JIES #204; DICT 22

11. ale

'grain, seed'

PRE-BASQUE: ***alle** 'seed'

PROTO-BASQUE: ***alg-** 'grain'

PIE: ***h₂3(e)lǵ(h)-** 'grain'

OTHER IE LANGUAGES: Hittite **halki-** 'barley, grain', Tocharian B **lyekšye** 'millet'

SOURCES: T 306, 311; T-E 87, 388, 391; M-A 165; K 274; AD 567; JIES #205; DICT 23

12. gar (B HN LN Z R), kar (LN), khar (L LN)

'flame'

PRE-BASQUE: ***gar** 'flame'

PROTO-BASQUE: ***gar**

PIE: ***g^{wh}er-** 'heat'

PROTO-CELTIC: ***g^wer-o-** 'to warm up, to heat', Proto-Celtic ***g^wrīns-** / ***g^wrenso-** 'heat'

CELTIC: Old Irish **gorn** 'fire', Old Irish **grīs** 'heat, fire'; Middle Welsh **gwres** 'heat (of the sun, fire)'

OTHER IE LANGUAGES: Albanian **zjarm** 'fire' (< PIE *g^{wh}er-mo-), English **warm**

SOURCES: T 129, 173, 178, 311; T-E 198, 386, 392; M-A 344; M 146, 147; KR 575; IEW 493f; LIV 219f; JIES #36; DICT 74

13. gizon (c excl. Z), gixon (B G), gízun (Z LN)

'man, person'

PRE-BASQUE: ***gizon** 'man'

PROTO-BASQUE: ***giθonV**

PIE: ***d^hǵ^hom-yo-** / ***d^hǵ^hm-on-** 'human, earthling'

PROTO-CELTIC: ***gdonyo-** 'human, person'

CELTIC: Gaulish **-xtonio** /gdonio/, Old Breton **don**

OTHER IE LANGUAGES: Latin **homō** 'man, human being', Gothic **guma** 'man'

COMMENT: a similar metathesis (*d^hġ^h- > *gd-) can be seen in Proto-Celtic. In Pre-Proto-Basque, the process must have been *d^hġ^h- > *ġ^hd^h- (metathesis) > *ġd^h- (loss of first aspiration) > *gd^h- (loss of palatalization) > *gid^h- (anaptyxis in the initial consonant cluster).

SOURCES: T 142, 173, 271; T-E 19, 37, 206, 387, 393; M-A 206; M 156; V 287; KR 195; IEW 414; JIES #40; DICT 77

14. **ih** (L LN), **ĩhĩ** (Z), **ii** (B G), **i** (B Sout HN), **zii** (B), **zi** (B)

'reed, rush'

PRE-BASQUE: ***ini** 'reed, rush'

PIE: ***yoini-** 'reed, rush'

PROTO-CELTIC: ***yoyni-** 'rushes, reed'

CELTIC: Middle Irish **áin** 'rushes, reed'

OTHER IE LANGUAGES: Latin **iuncus** 'reed, rush' (< *ioni-ko-)

COMMENT: *yVi- > i- as in **itz** 'word' (see below).

SOURCES: T 176, 308; T-E 200, 220, 396, 398; M-A 162; M 437; V 313; IEW 513; JIES #243; DICT 82

15. **oro** (old B HN L LN Z R)

'all'

PRE-BASQUE: ***oro** (*recte* ***olo**) 'all'

PROTO-BASQUE: ***ol-**

PIE: ***h₃ol-** / ***h₂ol-** 'all'

PROTO-CELTIC: ***ol-yo-** 'all, whole, every'

CELTIC: Gaulish **ollon**, Middle Welsh **oll**, Middle Breton **oll** 'all'

OTHER IE LANGUAGES: Old High German **al** 'all, every, complete'

COMMENT: Pre-Basque should actually be reconstructed as ***olo**, with subsequent regular rhotacism of intervocalic *l. Also see **oso** 'whole', below.

SOURCES: T-E 315, 385, 394; M 298; KR 23; JIES #72; DICT 113

16. **orein**

'deer'

PRE-BASQUE: ***orein** 'deer' (*recte* ***eleni**)

PROTO-BASQUE: ***elen-**

PIE: ***h₁el-h₁en-** 'red deer' > ***h₁el-h₁n-ih₂** 'hind/cow-elk' (fem.)

PROTO-CELTIC: ***elanī** 'doe, hind'

CELTIC: Middle Welsh **elein** 'doe, hind'

OTHER IE LANGUAGES: Russian **olén** 'deer', Lithuanian **elenis** 'deer', Armenian **eln** 'deer-cow, hind'

COMMENT: *h₁elh₁nih₂ > *eleni > *ereni (with regular rhotacism of intervocalic *l) > *oreni (probably by analogy with **orkatz** 'deer') > **orein** by P2 (T-E 25-26).

SOURCES: T 298; T-E 25-26, 314, 386, 394; M-A 139,141; M 115; MART 253; DERK 140; IEW 303f; JIES #226; DICT 112

17. **ibai** (B G HN L LN Z), **hibai** (L LN)

'river'

PRE-BASQUE: ***ibai** (*recte* ***ibani**) 'river'

PROTO-BASQUE: ***aban-**

PIE: ***h₂ep-h₃on-** / ***h₂ebh-ŋ-** 'river'

PROTO-CELTIC: ***abon-** 'river'

CELTIC: Old Irish **ab** 'river', Middle Welsh **afon** 'river'

OTHER IE LANGUAGES: Palaic **hāpna** 'river', Latin **amnis** 'river'

COMMENT: ***h₂ebh-ŋ-** > ***aben-** > ***aban-** > ***iban-**; Pre-Basque should be reconstructed as ***ibani**, with subsequent regular loss of intervocalic ***n**.

SOURCES: T 313; T-E 217, 388, 393; M-A 126; M 23-24; V 39; K 295; IEW 1; JIES #48; DICT 80

18. **izar**

'star'

PRE-BASQUE: ***izar** 'star'

PROTO-BASQUE: ***asar**

PIE: ***h₂s-tér** 'star'

PROTO-CELTIC: ***sterā** 'star'

CELTIC: Old Irish **ser**, Middle Welsh **ser**

OTHER IE LANGUAGES: Greek **astér** 'star', Hittite **haster(a)-** 'star', English **star**

COMMENT: ***h₂stér** > ***astér** > ***asér** (with ***st** > ***s** as in Celtic) > ***azár** > **izar** (with pre-tonic ***a-** > **i-** as in **ibai** 'river').

SOURCES: T 174, 313; T-E 19, 235, 389, 393; M-A 129; M 355; B 156; K 326; KR 478; IEW 1028; JIES #58; DICT 94

19. **txori** (B G HN LN R), **txó(r)i** (Z), **xori** (HN L LN), **xo(r)i** (Z)

'bird'

PRE-BASQUE: ***zori** 'bird'

PROTO-BASQUE: ***sor-**

PIE: ***ster-**, ***stor-** 'a kind of bird'

OTHER IE LANGUAGES: Latin **sturnus** 'starling' (< ***stor-no-**), Old Norse **stari** 'starling', English **starling**, Czech **sternad** 'bunting', Prussian **starnite** '(sea-)gull'

COMMENT: ***stor-** > ***zor-** (with ***st** > **z** as in **izar** 'star'), plus **-i** ending found in several animal names⁵. See DICT for a detailed discussion of PIE reconstructions underlying this etymology. Basque **zori** 'luck' has the same origin (see T 296 for the semantic shift 'bird' > 'omen' > 'luck').

SOURCES: T 296, 352; T-E 377-378, 385, 394; M-A 145; V 593; KR 475; B 158; IEW 1036; JIES #79; DICT 122

⁵ e.g. **ahari** 'ram', **ardi** 'sheep', **behi** 'cow', **euli** 'fly', **zorri** 'louse'

20. **larru** (G HN L LN R), **lárrü** (Z), **narru** (B Sout)

'skin, hide (n.)'

PRE-BASQUE: ***larru** 'skin'

PROTO-BASQUE: ***felarru**

PIE: ***pel-** 'to skin' > PIE ***pl-et-ro-**

PROTO-CELTIC: ***fletro-** 'hide, leather'

CELTIC: Middle Welsh **lledr**, Modern Breton **ler** 'hide, leather'

OTHER IE LANGUAGES: Latin **pellis** 'skin, hide' (< *pel-ni-), English **leather** (via Celtic)

COMMENT: loss of *p and assimilation of Inlaut consonant cluster as in Celtic.

SOURCES: T 173, 251, 287; T-E 262, 397, 398; M-A 182; M 134; V 455; KR 332; IEW 803f; JIES #90; DICT 99

21. **errun**

'to lay eggs'

PRE-BASQUE: ***errun** < ***-rrun-** (*recte* ***-erru-**)

PROTO-BASQUE: ***erru-**

PIE: ***h₁en-dró-** 'egg, scrotum'

OTHER IE LANGUAGES: Sanskrit **अण्डा-** 'egg, testicle, scrotum'

COMMENT: *h₁endro- > *endro- > *endru- > *erru-; **arraultza/e**, **arrau(n)tza** 'egg' also derives from this root, with noun-forming suffix **-(k)untza**. For a discussion of an *e-...-(e)n verbal circumfix, see below.

SOURCES: T 315; T-E 107, 179, 256, 396, 398; M-A 184; JIES #27; DICT 63

22. **ilun** (HN A S), **ilhun** (L LN), **iluñ** (Sout), **illun** (B G HN), **ulún** (R), **úlhün** (Z)

'dark, darkness, night'

PRE-BASQUE: ***illun** 'dark'

PROTO-BASQUE: ***en-lunn-**

PIE: ***leuk-** 'to shine; light' > PIE ***louk-s-no-** 'shiny, bright' > ***ṇ-louk-s-no-** 'unlit, dark'

PROTO-CELTIC: ***louko-** 'bright, light'

CELTIC: Middle Irish **luach** 'glowing white', Middle Irish **luan** 'light, moon' (< *louk-s-n-)

OTHER IE LANGUAGES: Avestan **raoxšna-** 'light'; Middle High German **liehsen** 'bright', Latin **lūx** 'light', Latin **lūna** 'moon' (< *louk-s-nh₂- 'shiny, bright'), English **light**, English **unlit**, Greek **lúkhnos** 'light, lamp' (< *luk-s-no-).

COMMENT: *ṇlouksno- > *enluksno- > *enlunn- > *ellunn- > *illunn-; for *(-)ell- > *(-)ill- compare **hilargi** 'moon', **ibili** 'to move' (see below).

SOURCES: T 99, 143, 210, 310; T-E 47, 224, 386, 393; M-A 129; M 245; V 352, 355; KR 333; MART 320; B 880; IEW 687f; LIV 418f; JIES #53; DICT 87

Summary of sound laws identified so far

For the sake of simplicity and legibility, asterisks will be omitted before proto-phonemes.

Sound law	Evidence
$b^h > b$	ebri, ibai
$Cl > ll$	ilun
$Cn > nn$	ilun
$d^h > z$	gizon
$d^h\hat{g}^h- > gid^h-$	gizon
$e > e$	eseri, larru
$e- > \emptyset-$	eta (> ta)
$ei > e$	negu
$en > an$	ibai
$er > ar$	gar, izar, larru
$\hat{g} > g$	argi, egin
$g^{wh} > g$	negu, gar
$h_1e > e$	eta, errun
$h_2(e) > a / i$	argi, ala, ale, ibai, izar
$h_{2/3}o > o$	oro
$i > i$	argi, ebri
$k^w > k$	ikusi
$l > l$	oro, orein, larru, ilun
$lC > ll$	ala, ale
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai
$\eta C > eC / iC$	ebri, ilun
$\eta V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru
$ou > u$	ilun
$p > \emptyset$	larru
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun
$rw > rr$	zorri
$s > s / z$	zorri, eseri, ikusi
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri
$t > t$	eta
$Tr > rr$	larru, errun
$uh_1 > u$	ur
$VdV > VrV$	eseri
$yVi > i$	ihi

Etymologies with *Tu > *tsu > (t)z(u/i)

Primary *u and secondary *u (< *o) assibilate a previous dental (usually *t). The most obvious cases are listed below; many more will be added in following sub-sections. The first step is assibilation: *Tu > *tsu⁶; then in some cases u > i/ø and/or tz > z.

23. **zulo** (B G HN), **zulho** (L LN), **zilo** (L LN B), **zílo** (Z), **zilho** (L LN)

'hole'

PRE-BASQUE: ***zullo** 'hole'

PROTO-BASQUE: ***tsullo**

PIE: ***teuk-** 'to beat, perforate' > PIE ***tuk-slo-**

PROTO-CELTIC: ***tullo-** 'pierced, perforated'

CELTIC: Old Breton **tull** 'hole'

SOURCES: T 173, 177; T-E 380, 387, 395; M 393; IEW 1032f; LIV 640; JIES #85; DICT 138

24. **otz**, **hotz**

'cold (n., adj.)'

PRE-BASQUE: *[h]**otz** 'cold'

PROTO-BASQUE: ***ougtsu**

PIE: ***h₃eug-** 'cold' + *-to- / *-tu-

PROTO-CELTIC: ***owg-ro-** 'cold (adj.)', Proto-Celtic ***owxtu-** 'cold (n.)'

CELTIC: Old Irish **ócht** 'cold' (< PIE *h₃oug-tu-)

OTHER IE LANGUAGES: Latvian **aūksts** (< PIE *h₃oug-s-to-), Armenian **oyc** 'cold'

SOURCES: T 137, 174, 178; T-E 20, 47, 322, 386, 394; M-A 348; M 301, 304; MART 569; IEW 783; JIES #74; DICT 116

25. **aintzin** (L LN), **ainzin** (LN), **aitzin** (HN L LN Z), **aitzine** (Z), **altzin** (LN S), **antzin** (R)

'before, in front of, forward; front, space in front'

PRE-BASQUE: *N/A* (*recte* ***antzin**)

PROTO-BASQUE: ***antsun-**

PIE: ***h₂ent-** 'front, face, forehead' > ***h₂ent-h₃en-**

PROTO-CELTIC: ***antono-** 'forehead'

CELTIC: Old Irish **étan** 'forehead'

OTHER IE LANGUAGES: Latin **ante** 'before, in front of', Hittite **hant-** 'forehead'

COMMENT: *h₂ent-h₃en- > *anton- > *antun- > *antsun- > *antzin-. See DICT for further details.

SOURCES: T 99, 142; T-E 33, 34, 80, 336, 417, 418; M 39; V 45; K 287; IEW 48f; JIES #2; DICT 20

⁶ a similar, selective assibilation of *t before *u can be seen e.g. diachronically in Ancient Greek and synchronically in modern Japanese (where /tu/ = [tɕu])

26. zur (c excl. R), zūr (R), zul (B)

'wood'

PRE-BASQUE: ***zur** 'wood'

PROTO-BASQUE: ***tsuru**

PIE: ***doru** 'tree, wood'

PROTO-CELTIC: ***daru-** 'oak'

CELTIC: Old Irish **daur**, Middle Welsh **dar** 'oak', Old Breton **dar** 'oak'

OTHER IE LANGUAGES: Greek **dóru** 'wood, tree', Hittite **tāru** 'wood', English **tree**

COMMENT: *doru > *duru > *tsuru > *zuru > zur.

SOURCES: T 144, 173, 178, 310; T-E 20, 381, 390, 395; M-A 156; M 91; B 349; K 849; KR 522; IEW 214f; JIES #86; DICT 138

27. hezur (L LN Z), ezur (G HN L LN), ézūr (Z), ězur (R), enzur (R), azur (B)

'bone'

PRE-BASQUE: ***enazur** 'bone'

PROTO-BASQUE: ***enetsur**

PIE: ***h₁eh₁-tor** 'internal organ' > PIE ***h₁en-h₁eh₁-tor / *h₁en-h₁oh₁-tro-**

PROTO-CELTIC: ***enātro-** 'entrails, bowels'

CELTIC: Middle Irish **inathar** 'entrails, bowels'

OTHER IE LANGUAGES: Greek **ētor** 'heart', Old High German **ād(a)ra** 'vein, sinew, muscle', Middle High German **in-ædere** 'entrails, veins'

COMMENT: *h₁en-h₁eh₁-tor > *enator > *enetsur > *enatsur > *enazur. Common semantics underlying these diverse IE meanings is 'inner part of body'.

SOURCES: T 174, 178, 283, 394; T-E 191, 385, 392; M-A 187; M 115; B 527; KR 120; JIES #33; DICT 69

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous section (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
$b^h > b$	ebri, ibai
$Cl > ll$	ilun, zulo
$Cn > nn$	ilun
$d^h > z$	gizon
$d^h\hat{g}^h- > gid^h-$	gizon
$e > e$	eseri, larru
$e- > \emptyset-$	eta (> ta)
$ei > e$	negu
$en > an$	ibai
$er > ar$	gar, izar, larru
$\hat{g} > g$	argi, egin
$g^{wh} > g$	negu, gar
$h_1e > e$	eta, errun, hezur
$h_2(e) > a / i$	argi, ala, ale, ibai, izar, aintzin
$h_{2/3}o > o$	oro
$h_3eu > o$	otz
$i > i$	argi, ebri
$k^w > k$	ikusi
$l > l$	oro, orein, larru, ilun
$lC > ll$	ala, ale
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur
$\eta C > eC / iC$	ebri, ilun
$\eta V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur
$ou > u$	ilun
$p > \emptyset$	larru
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur
$rw > rr$	zorri
$s > s / z$	zorri, eseri, ikusi
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri

The core evidence

t > t	eta
Tr > rr	larru, errun
Tu > tsu > (t)z(u/i)	aintzin, hezur, otz, zulo, zur
u > u	zulo
uh ₁ > u	ur
VdV > VrV	eseri
yVi > i	ihi

Etymologies with *g^w- > b-

This simple sound law is shared with Celtic (as well as e.g. Italic and Greek).

28. behi (L LN), béhi (Z), bei (G HN A S R)

'cow'

PRE-BASQUE: ***be[h]i** 'cow' (*recte* ***be-i** 'bovine')

PROTO-BASQUE: ***beu-**

PIE: ***g^wōw-** / ***g^weh₃-u-**, ***g^wh₃-eu-** 'cow'

PROTO-CELTIC: ***bow-** 'cow'

CELTIC: Old Irish **bó** 'cow', Middle Welsh **bu** 'cow'

OTHER IE LANGUAGES: Lycian **uwehi** 'bovine'; Latin **bōs** 'bovine animal, cattle, ox, bull, cow'; Greek **boûs** 'cow, bull, ox', English **cow**

COMMENT: *g^wh₃eu- > *g^weu- > *beu- > *be-, plus -i ending found in several animal names⁷; also compare Lycian for a similar formation. Basque **(b)uztarri** 'yoke' derives from Proto-Basque ***bus-tar-yV-** 'cow's yoke', from a PIE *-s genitive of 'cow' + PIE ***d^hwerh_x-** 'yoke' + a *-yV- extension seen e.g. in Sanskrit **dhūriya-** 'draft animal' and Hittite **tūriye-** 'to harness' (see DICT for more details).

SOURCES: T 133, 297; T-E 19, 20, 27, 133, 150, 215, 362, 386, 390, 391, 392; M-A 139-140, 248; M 71; V 74; K 507, 900; B 232; KR 299; IEW 482; JIES #208, #230; DICT 39, 47

29. bizi

'alive, living; life'

PRE-BASQUE: ***bizi** 'alive, living'

PROTO-BASQUE: ***biutsu**

PIE: ***g^w(e)ih₃-** 'to live' > ***g^wih₃-eto-**

PROTO-CELTIC: ***biwo-** 'alive'

CELTIC: Middle Welsh **byw** 'living, alive; life'; Old Cornish **biu** 'life'

OTHER IE LANGUAGES: Greek **bíotos** 'life' (< *g^wih₃-eto-); Avestan **jiyā-tu-** 'life'; Sanskrit **jīvitá-** 'living'; Lithuanian **gyvatà** 'life'; Old Prussian **giwato** 'life', Gothic **qius** 'alive', English **quick**, Latin **vīvus** 'alive', Latin **vīta** 'life' (< *g^wiH-wo-t-), Oscan **biítam** 'life' (< *g^wiH-t-)

COMMENT: *g^wih₃eto- > *g^wioto- > *g^wiutsu- > *biutsu > *biuzi > bizi.

SOURCES: T 129, 312; T-E 145, 385, 387, 392; M-A 188; M 67; B 216; V 685; KR 320; DERK 563; IEW 467f; LIV 215f; JIES #17; DICT 44

⁷ e.g. **ahari** 'ram', **ardi** 'sheep', **euli** 'fly', **txori** 'bird', **zorri** 'louse'

30. **buztan** (c excl. Sout Z), **búztan** (Z), **buztain** (Sout)

'tail, penis (B G)'

PRE-BASQUE: ***buztan** 'tail'

PROTO-BASQUE: ***bust-**

PIE: ***g^wosd^ho-** 'piece of wood, sprig'

PROTO-CELTIC: ***buzdo-** 'tail, penis'

CELTIC: Middle Irish **bot** 'tail, penis'

SOURCES: T-E 150, 389, 392; M 85; IEW 485; JIES #18; DICT 47

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
b ^h > b	ebri, ibai
Cl > ll	ilun, zulo
Cn > nn	ilun
d ^h > z	gizon
d ^h ǵ ^h - > gid ^h -	gizon
e > e	eseri, larru
e- > Ø-	eta (> ta)
eh ₃ > e	behi
ei > e	negu
en > an	ibai
er > ar	gar, izar, larru
ǵ > g	argi, egin
g ^w - > b-	behi, bizi, buztan
g ^{wh} > g	negu, gar
h ₁ e > e	eta, errun, hezur
h ₂ (e) > a / i	argi, ala, ale, ibai, izar, aintzin
h _{2/3} o > o	oro
h ₃ eu > o	otz
i > i	argi, ebri, bizi
iV > i	bizi
k ^w > k	ikusi
l > l	oro, orein, larru, ilun

The core evidence

IC > II	ala, ale
my > n	gizon
n > n	egin, ihi, orein, ibai, aintzin, hezur
ŋC > eC / iC	ebri, ilun
ŋV > enV	ibai
o > o / u	negu, zorri, txori, larru, zulo, zur, buztan
ou > u	ilun
p > Ø	larru
r > r	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur
rw > rr	zorri
s > s / z	zorri, eseri, ikusi
sd^h > zt	buztan
sn- > n-	negu
st > z	izar, txori
swVr > sVrw	zorri
t > t	eta
Tr > rr	larru, errun
Tu > tsu > (t)z(u/i)	aintzin, hezur, otz, zulo, zur, bizi
u > u	zulo
uh ₁ > u	ur
VdV > VrV	eseri
yVi > i	ihi

Etymologies with *K^w > b

Again, a simple sound law with obvious parallels in Brittonic Celtic, where *k^w > p.

A counter-example is **ikusi** 'to see', where *k^w > k (see above); this verb should therefore probably be considered as a Celtic loan (unless *k^w was delabialized e.g. by preceding *d).

31. -bil

'round'

PRE-BASQUE: ***bil** / ***bill** 'round'

PROTO-BASQUE: ***bel(-n)-**

PIE: ***k^welh₁-** 'to turn, go round' + ***-neh₁-** extension

PROTO-CELTIC: ***k^wal-na-** 'to go around'

CELTIC: Old Irish **imm-cella** 'surrounds' (< *ambi-k^wal-na-)

OTHER IE LANGUAGES: Sanskrit **cáratī** 'moves, wanders', Greek **pélomai** 'to be in motion', Old Church Slavic **kolo** 'wheel'

COMMENT: Basque **ibili** / **ebili** 'to move' (< *e-bill-i) has the same origin. For *(-)ell- > *(-)ill- compare **ilun** 'dark' (see above) and **hilargi** 'moon' (see below).

SOURCES: T 150, 154, 178, 255, 294; T-E 20, 21, 32, 48, 55, 56, 142, 217, 385, 388, 392; M-A 377-378; M 174; V 125; B 1168; IEW 639f; LIV 386f; JIES #16, #219; DICT 44, 81

32. ba-

'if' (verbal prefix)

PRE-BASQUE: ***ba-** 'if'

PROTO-BASQUE: ***ba**

PIE: ***k^w-** 'interrogative stem' > ***k^weh₂** (fem.)

PROTO-CELTIC: ***k^wēs** 'who'

CELTIC: Old Welsh **pui** 'who', Old Breton **pou** 'who'

OTHER IE LANGUAGES: English **whether** 'if', German **wenn** 'if', Latin **quā** 'inasmuch as', Greek **poû** 'where'

SOURCES: T-E 123, 387, 391; M-A 419-420; M 178; V 507-508; KR 264; B 1215; IEW 644f; JIES #207; DICT 35

33. **belaun** (B G HN), **belhaun** (L LN), **belaiñ** (Z), **beláin** (R), **bélhañ** (Z), **belháñ** (Z), **beléin** (R)

'knee'

PRE-BASQUE: ***bellaun** 'knee'

PROTO-BASQUE: ***ben-glaun**

PIE: ***ĝonu** / ***ĝen-u-** 'knee' > ***ĝnu-no-**

PROTO-CELTIC: ***(k^wenno)-glūnos** 'knee(cap)'

CELTIC: Middle Welsh **pen-(g)lin**, Middle Breton **penn-glin**, Old Cornish **penclin** 'knee', Old Irish **glūn** 'knee'

OTHER IE LANGUAGES: Latin **genu** 'knee', English **knee**, etc.

COMMENT: Basque **belau** might be either a Celtic loan or a regular reflex of the same proto-form ***kwēno-glūnos** which underlies most Celtic cognates; see DICT for a discussion.

SOURCES: T 285; T-E 134, 387, 391; M-A 183; M 162, 177; V 259; KR 296; IEW 380f; JIES #133; DICT 40

34. behor (L LN), beor (B Sout G HN S R), beur (R), bóhor (Z)

'mare'

PRE-BASQUE: ***be[h]or** 'mare' (*recte* ***beolV?**)

PROTO-BASQUE: ***ebeolV?**

PIE: ***h₁ekwo-** 'horse' + ***-VIV-** diminutive extension

PROTO-CELTIC: ***ekwālo-** 'foal'

CELTIC: Middle Welsh **ebawl** 'foal', Old Breton **ebol** 'foal'

OTHER IE LANGUAGES: Latin **equa** 'mare', Latin **equola** 'young mare', Latin **eculeus** 'foal, pony'

COMMENT: Basque **behor** may be either a direct reflex from PIE, or a Celtic loan: see DICT for a discussion.

SOURCES: T 300; T-E 19, 135, 387, 392; M-A 139; M 114; V 192; IEW 301; JIES #240; DICT 41

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
b ^h > b	ebri, ibai
Cl > ll	ilun, zulo, belau
Cn > nn	ilun
d ^h > z	gizon
d ^h g ^h - > gid ^h -	gizon
e > e	eseri, larru, belau
e- > Ø-	eta (> ta), behor
eh₂ > a	ba-
eh ₃ > e	behi
ei > e	negu
ell > ill	-bil
en > an	ibai
er > ar	gar, izar, larru
ġ > g	argi, egin
g ^w - > b-	behi, bizi, buztan
g ^{wh} > g	negu, gar

The core evidence

$h_1e > e$	eta, errun, hezur
$h_2(e) > a / i$	argi, ala, ale, ibai, izar, aintzin
$h_{2/3}o > o$	oro
$h_3eu > o$	otz
$i > i$	argi, ebri, bizi
$iV > i$	bizi
$k^w > k / b$	ikusi, -bil, ba-, belaun, behor
$l > l$	oro, orein, larru, ilun, behor
$lC > ll$	ala, ale, -bil
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur, belaun
$n_C > eC / iC$	ebri, ilun
$n_V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan
$ou > u$	ilun
$p > \emptyset$	larru
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur
$rw > rr$	zorri
$s > s / z$	zorri, eseri, ikusi
$sd^h > zt$	buztan
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri
$t > t$	eta
$Tr > rr$	larru, errun
$Tu > tsu > (t)z(u/i)$	aintzin, hezur, otz, zulo, zur, bizi
$\bar{u} > au$	belaun
$u > u$	zulo
$uh_1 > u$	ur
$VdV > VrV$	eseri
$yVi > i$	ihi

Etymologies with *(-)VKC- > *(-)ViC- and *-Vs > -V

Again, both sound laws have obvious Celtic parallels.

35. **itz** (G HN L LN), **hitz** (L LN Z)

'word'

PRE-BASQUE: *[h]itz 'word, speech, language'

PROTO-BASQUE: *yektsu

PIE: *yek- 'to say, speak' + *-to-

PROTO-CELTIC: *yextV- 'speech, language'

CELTIC: Middle Welsh **ieith** 'language', Middle Breton **yez** 'language'

OTHER IE LANGUAGES: Old High German **jiht** 'utterance', Umbrian **iuk-** 'word'

COMMENT: *yekto- > *yektsu- > *yeitz > itz (with *yVi- > i- as in **ihī** 'reed, rush') - or possibly straight from zero grade *ik-to- > *iktsu > *iitzu > itz.

SOURCES: T 174, 178; T-E 233, 390, 393; M 435-436; V 308; KR 272; IEW 503f; LIV 311; JIES #55; DICT 92

36. **gaitz** (G HN), **gatx** (B L LN Z)

'bad'

PRE-BASQUE: *gaitz 'bad'

PROTO-BASQUE: *waktsu-

PIE: *weh₂k- 'to be empty, lacking'

PROTO-CELTIC: *waxto- 'bad'

CELTIC: Middle Welsh **gwaeth** 'worse', Modern Breton **gwazh** 'worse'

OTHER IE LANGUAGES: Latin **vacō** 'to be empty', Hittite **wakk-** 'to be lacking'

COMMENT: *w(e)h₂k-to- > *wakto- > *waktsu- > *waktzi > *gaktzi > *gaitzi; for semantics, compare Proto-Celtic.

SOURCES: T 173; T-E 20, 195, 385, 392; M-A 319; M 405; K 940-941; JIES #34; DICT 73

37. **sei**

'six'

PRE-BASQUE: *sei 'six'

PROTO-BASQUE: *seks

PIE: *s(w)ek̑s '6'

PROTO-CELTIC: *swexs 'six'

CELTIC: Old Irish **sé** 'six'

OTHER IE LANGUAGES: Latin **sex** > Italian **sei**; Gothic **saihs**, English **six**, etc.

COMMENT: *seks > *seis > sei. Not a Romance loan (T 273, T-E 338).

SOURCES: T 173, 272-273; T-E 20, 338, 388, 394; M-A 313; M 364; V 560; KR 431; IEW 1044; JIES #76; DICT 118

38. **aho** (L LN Z), **ao** (B G HN R), **ago** (B G HN R Z)

'mouth'

PRE-BASQUE: *a[h]o 'mouth'

PROTO-BASQUE: *eo

PIE: *h₁oh₁(e)s- / *h₃eh₁(o)s / *h₁eh₃-es- 'mouth'

PROTO-CELTIC: *ās- 'mouth'

CELTIC: Old Irish á 'mouth'

OTHER IE LANGUAGES: Avestan āh- 'mouth', Khotanese āha- 'mouth', Hittite ais 'mouth', Old Norse óss 'mouth of a river'

COMMENT: *h₁eh₃es- > *eos > *eo > ao (same initial vowel as in Celtic).

SOURCES: T 152, 176, 286; T-E 17, 19, 31, 95, 388, 391; M-A 175; M 44; V 436; K 166; KR 394; IEW 784f; JIES #1; DICT 25

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
b ^h > b	ebri, ibai
Cl > ll	ilun, zulo, belaun
Cn > nn	ilun
d ^h > z	gizon
d ^h ġ ^h - > ġid ^h -	gizon
e > e	eseri, larru, belaun, sei
e- > Ø-	eta (> ta), behor
eh ₂ > a	ba-, gaitz
eh ₃ > e	behi
ei > e	negu
ell > ill	-bil
en > an	ibai
er > ar	gar, izar, larru
ġ > g	argi, egin
g ^w - > b-	behi, bizi, buztan
g ^{wh} > g	negu, gar
h ₁ e > e	eta, errun, hezur
h ₂ (e) > a / i	argi, ala, ale, ibai, izar, aintzin

The core evidence

$h_{2/3}o > o$	oro
$h_3eu > o$	otz
$i > i$	argi, ebri, bizi
$iV > i$	bizi
$k^w > k / b$	ikusi, -bil, ba-, belaun, behor
$l > l$	oro, orein, larru, ilun, behor
$lC > ll$	ala, ale, -bil
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur, belaun
$n_C > eC / iC$	ebri, ilun
$n_V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan
$ou > u$	ilun
$p > \emptyset$	larru
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur
$rw > rr$	zorri
$s > s / z$	zorri, eseri, ikusi, sei
$sd^h > zt$	buztan
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri
$t > t$	eta
$Tr > rr$	larru, errun
$Tu > tsu > (t)z(u/i)$	aintzin, hezur, otz, zulo, zur, bizi, itz, gaitz
$\bar{u} > au$	belaun
$u > u$	zulo
$uh_1 > u$	ur
$VdV > VrV$	eseri
$VKC- > ViC$	itz, gaitz, sei
$-Vs > -V$	sei, aho
$w > g$	gaitz
$yVi > i$	ihi, itz

Etymologies with (*VIVC / *VdVC >) *VrVC > VrC and *VrtV > VrdV

Various rhotacism, syncope and voicing phenomena underlie several Basque etymologies; simple cases are listed below; more complex cases (interplaying with other sound laws) will be added in subsequent sections.

39. ardi

'sheep, ewe'

PRE-BASQUE: *ardi 'sheep'

PROTO-BASQUE: *art- 'sheep'

PIE: *h₁er(-i)-, *h₁r-i(-e)t- 'sheep, goat, lamb, kid'

PROTO-CELTIC: *erba 'fallow deer, roedeer'

CELTIC: Old Irish **erp** 'she-goat, doe, roe'

OTHER IE LANGUAGES: Latin **ariēs**, **ariet-is** 'ram'; Umbrian **eriet-** 'ram', Greek **éripheos** 'young goat, kid'

COMMENT: *h₁erit- > *erit- > (syncope) *ert- > *art- > *ard-, plus -i ending found in several animal names⁸.

SOURCES: T 301; T-E 19, 101, 388, 391; M-A 140; M 117; V 54; B 460; IEW 326; JIES #206; DICT 27

40. ardo (G HN S A), ardao (B Sout), ardau (B), ardão (old B), ardú (Z), ardáũ (R), arno (L LN), ano (LN)

'wine, fermented beverage'

PRE-BASQUE: *ardano 'wine, fermented beverage'

PROTO-BASQUE: *alutano-

PIE: *h₂el-u-(t)- 'fermented drink; beer'

OTHER IE LANGUAGES: Ossetic **æluton** 'beer', Armenian **awli** 'a strong fermented drink', Old Russian **олѣ** 'fermented liquor, strong drink', Old Prussian **alu** 'beer', Old Norse **öl** 'beer', Old English **ealoþ** 'ale', English **ale**

COMMENT: with a nasal suffix as e.g. in Ossetic: *h₂elut-eh₂no- > *alutano- > *arutano- (with regular rhotacism of intervocalic *-l-) > (syncope) *artano- > *ardano-

SOURCES: T-E 20, 25, 39, 42, 102, 200, 390, 391; M-A 263; MART 154, 660; DERK 370; KR 23; IEW 33-34; JIES #-; DICT 27

41. oso

'whole, complete, total, entire'

PRE-BASQUE: *oso 'whole' (recte *olVzo)

PROTO-BASQUE: *olV-so

PIE: *h₃ol- / *h₂ol- 'all'

PROTO-CELTIC: *ol-yo- 'all, whole, every'

⁸ e.g. **ahari** 'ram', **behi** 'cow', **euli** 'fly', **txori** 'bird', **zorri** 'louse'

CELTIC: Old Irish **uile**, Gaulish **ollon**, Middle Welsh **oll**, Middle Breton **oll** 'all'

OTHER IE LANGUAGES: Gothic **alls** 'all, every', English **all**

COMMENT: Same root as **oro** 'all', plus *-Vso- extension: *h₃ol-Vso- > *olVso- > *olVzo > *orVzo (with regular rhotacism of intervocalic *-l-) > (syncope) *orzo > oso (apical assimilation: P19 in T-E 28).

SOURCES: T-E 19, 319, 389, 394; M 298; KR 23; JIES #73; DICT 115

42. **hartz** (L LN Z), **ortz** (B Sout G HN L LN R)

'incisor tooth'

PRE-BASQUE: *[h]ortz 'incisor tooth'

PROTO-BASQUE: *odents(u)

PIE: *h₃d-ŋt- 'tooth'

PROTO-CELTIC: *danto- 'tooth'

CELTIC: Middle Welsh **dant**, Old Breton **dant** 'tooth'

OTHER IE LANGUAGES: Greek **odont-**, Latin **dent-** 'tooth', English **tooth**

COMMENT: from zero grade nominative *h₃dŋt-s > *ódŋts > *ódents > (common rhotacism of intervocalic *d) *orents > (syncope) *ornts > ortz. Alternatively, from an o-stem *h₃dŋt-o- > *odentsu > *odents etc.

SOURCES: T 287; T-E 316, 389, 394; M-A 174-175; M 90; V 166; B 1049; KR 509; IEW 289; JIES #47; DICT 114

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
b ^h > b	ebri, ibai
Cl > ll	ilun, zulo, belaun
Cn > nn	ilun
d ^h > z	gizon
d ^h ġ ^h - > ġid ^h -	gizon
e > e	eseri, larru, belaun, sei
e- > Ø-	eta (> ta), behor
eh ₂ > a	ba-, gaitz
eh ₃ > e	behi
ei > e	negu
ell > ill	-bil
en > an	ibai
er > ar	gar, izar, larru, ardi
ġ > g	argi, egin
g ^w - > b-	behi, bizi, buztan

The core evidence

$g^{wh} > g$	negu, gar
$h_1e > e$	eta, errun, hezur, ardi
$h_2(e) > a / i$	argi, ala, ale, ibai, izar, aintzin, ardo
$h_{2/3}o > o$	oro, oso
$h_3C > oC$	hortz
$h_3eu > o$	otz
$i > i$	argi, ebri, bizi
$iV > i$	bizi
$k^w > k / b$	ikusi, -bil, ba-, belaun, behor
$l > l$	oro, orein, larru, ilun, behor, ardi, ardo
$lC > ll$	ala, ale, -bil
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur, belaun, ardo
$n_C > eC / iC$	ebri, ilun, hortz
$n_V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan
$ou > u$	ilun
$p > \emptyset$	larru
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur, ardi
$rw > rr$	zorri
$s > s / z$	zorri, eseri, ikusi, sei
$sd^h > zt$	buztan
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri
$t > t$	eta, ardi, ardo
$Tr > rr$	larru, errun
$Tu > tsu > (t)z(u/i)$	aintzin, hezur, otz, zulo, zur, bizi, itz, gaitz, hortz?
$\bar{u} > au$	belaun
$u > u$	zulo
$uh_1 > u$	ur
$VdV > VrV$	eseri
$VKC- > ViC$	itz, gaitz, sei
$VrtV > VrdV$	ardi, ardo
$VrVC > VrC$	ardi, ardo, oso, hortz
$-Vs > -V$	sei, aho
$w > g$	gaitz
$yVi > i$	ihi, itz

Etymologies with *p- > *Ø-

This is a very well attested sound law – again, shared with Celtic. We have seen an instance already: **laru**; several additional cases are listed below.

43. **haur, aur**

'child'

PRE-BASQUE: *[h]aur 'child'

PROTO-BASQUE: *faur-

PIE: *peh₂u-ro- / *ph₂eu-ro- 'little, small'

OTHER IE LANGUAGES: Latin **puer** 'child, boy' (< *ph₂u-ero- 'smaller'), Latin **parvus** 'small', Greek **paûros** 'small', Faroese **faur** 'few', English **few**

COMMENT: *peh₂uro- > *pauo- > *faur- > aur

SOURCES: T-E 20, 118, 386, 391; M-A 211, 320; V 448, 496; B 1158; KR 132; IEW 842f; JIES #88; DICT 34

44. **uzu, izu, izi**

'trembling; panic, fright'

PRE-BASQUE: *izu 'trembling' (*recte* *uzu 'fear')

PROTO-BASQUE: *futsu-

PIE: *peu- 'to fear' > PIE *pou-tu- / 'fear'

PROTO-CELTIC: *fowtu- 'fear (noun)'

CELTIC: Old Irish **úath** 'horror, fear', Middle Breton **euz** 'horror', Cornish **uth** 'horror'

OTHER IE LANGUAGES: Latin **paveō** 'to be frightened'

COMMENT: *poutu- > *putu- > *putsu- > *futsu- > uzu.

SOURCES: T-E 237, 389, 393; M 138; V 451; IEW 827; JIES #222; DICT 95

45. **urzo** (eastern), **uso** (western)

'pigeon, dove'

PRE-BASQUE: *urzo 'pigeon, dove' (*recte* *uluzo)

PROTO-BASQUE: *fuluso-

PIE: *pel- 'grey' > PIE *pol-u-so- 'grey' > 'pigeon'

OTHER IE LANGUAGES: Greek **péleia** 'wild pigeon', Old Prussian **poalis** 'pigeon', Latin **palumbēs** 'wood-pigeon'; Sanskrit **paruṣā-** 'grey' (< *pe/ol(h_x)-u-so-)

COMMENT: *poluso- > *puluso- > *fuluso- > *uluzo- > (regular rhotacism of intervocalic *l) *uruzo > (syncope) urzo (> uso by apical assimilation: P19 in T-E 28). For *-VIVC- > -VrC- see above.

SOURCES: T 301; T-E 19, 28, 361, 386, 394; V 442, 497; B 1166; IEW 804f; JIES #227; DICT 128

46. ortzi (L LN old Z), **hortzi** (L LN), **ortze** (Z), **orz** (old LN S), **orze** (old Z), **osti** (B G), **ozti** (L G)

'thunder, lightning, storm, cloud, sky'

PRE-BASQUE: ***ortzi** 'sky' (*recte* 'thunder')

PROTO-BASQUE: ***forVtsu-**

PIE: ***per-** / ***por-** 'to strike, beat' > 'thunder'

OTHER IE LANGUAGES: Armenian **orot** 'thunder' < *por-ado-, Czech **perun** 'thunder', Lithuanian **Perkūnas** 'Thunder-god', Young Avestan **pərət-** 'battle', Sanskrit **pṛt-** 'battle, strife, fight'

COMMENT: *porV-t/do- > *porVtsu- > *forVtsu- > *fortsu- > *ortzu > ortzi.

SOURCES: T 127, 177, 279, 313; T-E 19, 316-317, 388, 394; M-A 410; MART 542-543; JIES #162; DICT 115

47. harri (L LN), **hárri** (Z), **arri** (B Sout G HN A S R)

'stone'

PRE-BASQUE: ***[h]arri** 'stone'

PROTO-BASQUE: ***farw-i**

PIE: ***peru-** 'stone'

OTHER IE LANGUAGES: Hittite **peru** 'rock', Sanskrit **párvata-** 'rock, mountain'

COMMENT: *peru- > *feru- + -i > *ferwi > *farwi > *arwi > arri.

SOURCES: T 163, 313; T-E 19, 108, 389, 391; M-A 122; K 668; JIES #216; DICT 30

48. hatz (L LN Z), **atz** (B Sout S R)

'paw, footprint'

PRE-BASQUE: ***[h]atz** 'paw'

PROTO-BASQUE: ***fed-s** / ***fetsu**

PIE: ***pod-**, ***ped-** 'foot' > ***ped-o-** 'trace, footstep, footprint'

PROTO-CELTIC: ***fod-** 'foot'

CELTIC: Galatian (?) **ades** 'feet'

OTHER IE LANGUAGES: Armenian **het** 'footprint' (< *pedo-), Armenian **ot-** 'foot', Tocharian A **päts** 'bottom' (< PIE *pédeh₂ 'bottom of the foot, footprint'), Old High German **fuoz** 'foot', English **foot**, Ossetic **fad** 'foot', Latin **pēs** (< *ped-s) 'foot', Latin **peda** 'footprint', Avestan **pad-** 'foot', Hittite **pat(a)-** 'foot', Greek **pod-** 'foot'

COMMENT: Either from *-s nominative *ped-s > *feds > *eds > *atz > atz, or, more likely via *ped-o- (as in Armenian): > *pedu- > *petsu > *fetsu > *ets > *ats (vowel lowering taking place before s-palatalization) > atz. Also see **oin** 'foot'.

SOURCES: T-E 114, 388, 391; M-A 183; M 136; V 462; K 653; B 1160-1161, 1227; MART 405, 534-535; KR 152; AD 362; IEW 790; JIES #87; DICT 32

49. oin (c. exc Z), oñ (B), uin (S), huñ (LN Z)

'foot'

PRE-BASQUE: *oin 'foot'

PROTO-BASQUE: *foð-en-

PIE: *pod- 'foot'

PROTO-CELTIC: *fod- 'foot'

CELTIC: Galatian (?) **ades** 'feet', Gallo-Latin **cant-edon** '100 feet'

OTHER IE LANGUAGES: Armenian **otn** 'foot' (an n-stem in the singular), Tocharian B ***paineṣṣe** 'pertaining to the feet', Greek **pod-** 'foot', English **foot**, etc.

COMMENT: same *-en- extension as in Armenian **otn** (according to AD 402, as well as Belardi and Pisani): *poden- > *foðen- > *oen > oin (see P61 in T-E 61). Also see **hatz** 'paw, footprint'.

SOURCES: T 147, 174, 285; T-E 20, 386, 394; M-A 183; M 136; MART 534-535; AD 401-402; B 1227; KR 152; IEW 790f; JIES #93; DICT 110

50. ile (R S), ilhe, ilhe (Z), ille (old LN), eile (A), elle (HN), ule (B Sout), ulle (B)

'hair, fur, wool'

PRE-BASQUE: *ille, *ulle 'hair'

PROTO-BASQUE: *filC-, *fulC- / *uln-

PIE: *pilo- / *pulo- 'body hair' > PIE *pil-so- / *pil-do- 'felt'; PIE *wlh₂neh_a- / *h₂ulh₁-neh₂- / *wol(h_x)-no- 'wool'

PROTO-CELTIC: *ful-V- 'beard'; Proto-Celtic *w(u)lāno, *w(u)lano- 'wool'

CELTIC: Middle Irish **ul(u)** 'beard'; Middle Irish **olann** 'wool'

OTHER IE LANGUAGES: Latin **pilus** 'hair', Greek **pīlos** 'felt'; Hittite **hulana-** 'wool', Gothic **wulla** 'wool', Old Norse **ull** 'wool', English **wool**, Greek **oûlos** 'woolly'

COMMENT: The frequent meaning 'wool' in Basque might also point to the merger of two PIE roots: *pil(C)o- / *pul(C)o- 'hair' > *(f)ill- / *(f)ull- and *ulh₂n- 'wool' > *uln- > *ull-.

SOURCES: T 285, 354; T-E 222, 285, 387, 393; M-A 177, 178; M 143, 432; V 325, 465; B 1126, 1190-1191; KR 598; IEW 830, 850, 1139; JIES #89

SOURCES: T 99, 143, 210, 310; T-E 47, 224, 386, 393; M-A 129; M 245; V 352, 355; KR 333; MART 320; B 880; IEW 687f; LIV 418f; JIES #53; DICT 85

51. hiri (L, LN), iri (HN, S, R), uri (B, G)

'town, city'

PRE-BASQUE: *[h]ili 'town, city'

PROTO-BASQUE: *fel-i

PIE: *pelh_x- 'fort, fortified place'

OTHER IE LANGUAGES: Greek **pólis** 'city', Sanskrit **pūr** 'wall, rampart, palisade', Lithuanian **pilis** 'fort, castle'

COMMENT: *pelh_x- > *fel- > *el- + -i > (by P37 in T-E 32) *ili. B **uri** by P65 in T-E 36.

SOURCES: T 325; T-E 32, 36, 229, 389, 393; M-A 221; B 1219; JIES #217; DICT 89

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
$b^h > b$	ebri, ibai
$Cl > ll$	ilun, zulo, belaun
$Cn > nn$	ilun
$d^h > z$	gizon
$d^h\hat{g}^h- > gid^h-$	gizon
$e > e$	eseri, larru, belaun, sei
$e- > \emptyset-$	eta (> ta), behor
$eh_2 > a$	ba-, gaitz, haur
$eh_3 > e$	behi
$ei > e$	negu
$ell > ill$	-bil
$en > an$	ibai
$er > ar$	gar, izar, larru, ardi, harri
$\hat{g} > g$	argi, egin
$g^w- > b-$	behi, bizi, buztan
$g^{wh} > g$	negu, gar
$h_1e > e$	eta, errun, hezur, ardi
$h_2(e) > a / i$	argi, ala, ale, ibai, izar, aintzin, ardo
$h_{2/3}o > o$	oro, oso
$h_3C > oC$	hortz
$h_3eu > o$	otz
$i > i$	argi, ebri, bizi
$iV > i$	bizi
$k^w > k / b$	ikusi, -bil, ba-, belaun, behor
$l > l$	oro, orein, larru, ilun, behor, ardi, ardo, urzo, ortzi, hiri
$lC > ll$	ala, ale, -bil, ile, ule
$my > n$	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur, belaun, ardo, oin
$nC > eC / iC$	ebri, ilun, hortz
$nV > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan, urzo
$ou > u$	ilun, uzu
$p- > \emptyset-$	larru, haur, uzu, urzo, ortzi, harri, hatz, oin, ile, hiri
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur, ardi, haur, ortzi, harri

The core evidence

rw > rr	zorri, harri
s > s / z	zorri, eseri, ikusi, sei, urzo
sd ^h > zt	buztan
sn- > n-	negu
st > z	izar, txori
swVr > sVrw	zorri
t > t	eta, ardi, ardo
Tr > rr	larru, errun
Tu > tsu > (t)z(u/i)	aintzin, hezur, otz, zulo, zur, bizi, itz, gaitz, hortz?, uzu, ortzi, hatz
ū > au	belaun
u > u	zulo, haur, ule
uh ₁ > u	ur
VdV > VrV	eseri
VdV > VV	oin
VKC- > ViC	itz, gaitz, sei
VrtV > VrdV	ardi, ardo
VrVC > VrC	ardi, ardo, oso, hortz, urzo, ortzi
-Vs > -V	sei, aho
w > g	gaitz
yVi > i	ihi, itz

Etymologies with (*uV >) *wV > gV

Both primary and secondary *w > g. We have encountered an instance already: **gaitz** 'bad'. Here are some more.

52. *(-)ga-, *gar-, *(-)go-

'up, high, top; to go up, to rise'

PRE-BASQUE: ***go-** 'up', ***gar-** 'over' (*my reconstructions*)

PROTO-BASQUE: ***ufo-** 'up', ***ufar-** 'over'

PIE: ***(h₁)(e)up-** 'to go up, rise' > PIE ***(h₁)up-o** 'up from underneath', PIE ***(h₁)up-er** 'over'

PROTO-CELTIC: ***ufo** 'under', ***ufor-** 'over, on'

CELTIC:

PIE ***(h₁)upo** > Old Welsh **gwo** 'under', Middle Welsh **go** 'under'; Old Breton **guo** 'under'; Modern Breton **gwa-**, **gou-** 'under', Cornish **go-**, **gwa-** 'under';

PIE ***(h₁)uper** > Old Welsh **guor** 'over, on', Middle Welsh **gor**, **gwar** 'over, on', Old Breton **guor-**, **gor-** 'over, on', Cornish **gor** 'over, on'.

OTHER IE LANGUAGES:

PIE ***(h₁)(e)up-** > Hittite **ūpp-** 'to go up, rise (of the sun)';

PIE ***(h₁)(e)up-n-** > English **up**, German **auf** 'up, on';

PIE ***(h₁)upo** > Sanskrit **úpa** 'on, onto; under; towards'; Old Norse **of** 'over'; Old High German **ob(a)** 'above, on, over'; Greek **hupó** '(from) under'; Latin **sub** (< *s-upo) 'under, reaching from below, up to';

PIE ***(h₁)uper** > Greek **hupér** 'over'; Latin **super** (< *s-uper) 'over, above'; Armenian **i ver** 'above, up, upwards'; Gothic **ufar** 'over'; English **over**; Sanskrit **upári** 'over'

COMMENT: Several Basque terms with a shape (-)ga-, gar-, (-)go- mean 'height, top; high; up; to go up', including:

gain 'top'

garai 'high; height'

goi 'high place, height, elevation; high'

go(i)ra 'up, upward'

igan, **igo(n)** 'to go up, ascend, climb'.

In PIE we have a root ***(h₁)(e)up-** 'to go up, rise', also seen in PIE ***(h₁)up-o** 'up from underneath' and in PIE ***(h₁)up-er** 'over'. If *u > *w (after loss of *p: see above) > g, then Pre-Basque can be derived from PIE as follows:

PIE ***(h₁)upo** > ***ufo** > ***uo** > ***wo** > ***go**

PIE ***(h₁)uper** > ***ufer** > ***ufar** > ***uar** > ***war** > ***gar**

From ***go-** + adj. **-i** ending we can easily derive **goi** 'high'. As per T-E 207, **go(i)ra** 'high; height' is an allative (-ra) derivative of **goi**. Interestingly, Basque **goiz** is both a noun, meaning 'morning', and a temporal adverb, meaning 'early'. Notably, another temporal adverb ends in **-iz**: it's **noiz** 'when', from interrogative stem **no-** (which see). So it is likely that **goiz** can be segmented as **go-iz** and was originally an adverb ('early'), later extended to a nominal meaning ('morning')⁹. From a semantic point of view, compare Hittite **ūpp-** 'to go up, rise (of the sun)': the adverb **goiz** may have originally meant 'when the sun goes up'.

⁹ see **egun** 'day' for a similar evolution from temporal adverb ('today') to noun ('day').

The Basque verb **igan** 'to go up, ascend, climb' has the interesting B variant **igon**. If we start from *-go- and add the verbal circumfix *e-...-en (see below) we have a protoform *e-go-en > *e-go-an which can explain both **igan** and **igon** (with regressive or progressive assimilation, respectively). Note that PIE *(h₁)up- is also attested with the verbal meaning 'to go up' in Hittite.

Summarizing, we have PIE *(h₁)upo- 'up from underneath' > Pre-Basque *go- '(to go) up' > go-i 'high', go(i)-ra 'upward', go-iz 'early', *e-go-an > **igan**, **igon** 'to go up'.

From PIE *(h₁)uper- > Pre-Basque *gar- we can easily derive **garai** 'high; height', segmentable as **gara-i**, with -i adj. suffix (T-E 199).

As for **gain** 'top', it may belong here as well, though the phonetic and morphological details are less clear. In **gain**, -n may have originally been an old locative ending (T 204). Additionally, **gain** may have had a variant *gan 'on top of, on', used as a postposition (T 202-203), which may point to a secondary origin of -i- in **gain** (see P45 in T-E 33?). Therefore, we can probably segment **gain** as **gai-n** < *ga-n, but the -a-vocalism in *ga- is not easy to explain if we want to derive it from Pre-Basque *go- < PIE *(h₁)upo, though we may note that a similar o/wa alternation can be found in some Brittonic reflexes of PIE *(h₁)upo, namely Modern Breton **gwa-**, **gou-** 'under' and Cornish **go-**, **gwa-** 'under'. Alternatively, we could derive **gain** < *garin < *gar-en < PIE *(h₁)uper-, plus the same -en locative found in place names ending in a consonant (T 202). The loss of *-r- in the context *-ari- would have interesting parallels in T-E 29 (P25, "Sporadic /r/ loss") and is probably seen also in the plural stem **haie-** < distal demonstrative **har-**.

Finally, **gero** 'later (adv.)' may also belong here, if < PIE *(h₁)uper-o- (V 601). Phonetically, this would be regular, as *er does not become *ar in open syllables. Semantically we should posit 'over' > 'beyond'¹⁰ > 'after'¹¹ > later'.

SOURCES: T 93, 99, 135, 144, 173, 177, 178, 214, 243, 277, 295; T-E 17, 20, 29, 34, 46, 48, 194, 198-199, 204, 207, 215, 218, 385, 387, 388, 389, 392, 393; M-A 289, 292; M 396, 398; V 594-595, 600-601; K 920-921; MART 592; B 1533, 1535; KR 120, 557; JIES #35, #37, #41, #42, #43, #49, #214; DICT 71

53. gazte

'young; young person'

PRE-BASQUE: ***gazte** 'young'

PROTO-BASQUE: ***wast-**

PROTO-CELTIC: ***wasto-** 'servant' (originally 'young man'?)

CELTIC: Old Irish **foss** 'male servant', Old Welsh **guas** 'servant', Modern Breton **gwaz** 'man, husband'

COMMENT: The Proto-Celtic term (whose PIE etymology is unclear) may have originally meant 'young man', a meaning that seems to resurface in some Celtic comparanda ('boy' > 'servant' and 'young man' > 'husband' are common semantic shifts). Either the Basque and Celtic terms have the same (unclear) PIE origin, or the Basque term is an early loan from some Celtic language.

SOURCES: T 175, 210; T-E 19, 203, 390, 393; M 404; JIES #13; DICT 76

54. gorri

'red'

PRE-BASQUE: ***gorr-i** 'red'

PROTO-BASQUE: ***wolyV-** 'bloody, blood-red'

PIE: ***welh_{2/3}-** 'wound' > strong grade ***wolh_{2/3}-** + *-yV- extension

PROTO-CELTIC: ***weli-**, ***woli-** 'blood', Proto-Celtic ***wlanno-** 'blood-red'

¹⁰ compare Greek **hupér** 'over, beyond'

¹¹ Pre-Basque ***gero** is glossed as 'after, later' in T-E 385

CELTIC: Middle Welsh **gweli** 'blood, wound', Cornish **goly** 'blood', Middle Irish **flann** 'blood-red'

OTHER IE LANGUAGES: Latin **volnus** 'wound'

COMMENT: *wolyV- > *golyV- > *gorr-; for semantics ('blood' > 'red'), compare Celtic (from the same root), as well as (from a different root) Hittite **ēšarwīl-** 'blood-red' < Hittite **ēšar** 'blood'.

SOURCES: T-E 210, 215, 388, 393; M-A 198; M 410, 425; V 687; K 256-258; IEW 1144f.; JIES #215; DICT 78

55. igari, igeri

'swimming'

PRE-BASQUE: *N/A (recte *-gad-)*

PROTO-BASQUE: ***-wad-**

PIE: ***weh₂d^h-** 'to wade'

OTHER IE LANGUAGES: Old High German **watan** 'to wade', English **wade**, Latin **vadum** 'ford'

COMMENT: *-weh₂d^h- > *-wad- > *-gad- > -gar- (with common rhotacism of intervocalic *-d-).

SOURCES: T 294; T-E 36, 219; M-A 404; V 650; KR 564; IEW 1109; LIV 664; JIES #50; DICT 82

56. hagin

'yew'

PRE-BASQUE: ***[h]agin** 'yew'

PROTO-BASQUE: ***ewVn-**

? PIE: ***h₁eiwo-** 'yew' + ***-Vn-** extension

PROTO-CELTIC: ***iwo-** 'yew'

CELTIC: Middle Welsh **ywen** 'yew (singulative)', Middle Breton **iuin** 'yew (collective)'

OTHER IE LANGUAGES: Hittite **eyan-** 'yew?', English **yew**

COMMENT: *h₁eiwVn- > *eiwVn- > *ewVn- > *egVn- is regular, but a- instead of **e- is unclear; otherwise, the semantic and phonetic match is good, including -n- extension as in some comparanda.

SOURCES: T 310, T-E 19, 78, 390, 391; M-A 160; M 173; K 233; KR 271; IEW 297; JIES #233; DICT 19

57. hegal (L LN Z), egal (HN L R), ega (B G HN L LN), hega (L LN), ego (B G HN)

'wing'

PRE-BASQUE: ***[h]ego, [h]egal** 'wing'

PROTO-BASQUE: ***age-(l)**

? PIE: ***h₂ewei-** 'bird'

OTHER IE LANGUAGES: Latin **avis** 'bird', Armenian **haw** 'bird'

COMMENT: the semantic match is compelling, but PIE *h₂e- should yield **a-, while PIE *-ei- should yield **-e, i.e. the regular reflex of PIE *h₂ewei- should probably be **age, not **ega**: we may have a metathesis here (*age > **ega**). Some Basque variants have -l, some don't: this may be due to an optional -l- (adjectival or diminutive?) extension.

SOURCES: T 175, 177; T-E 162, 390, 392; M-A 143; M 50; V 65; MART 398; IEW 86; JIES #155; DICT 51

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
$b^h > b$	ebri, ibai
$Cl > ll$	ilun, zulo, belaun
$Cn > nn$	ilun
$d^h > z$	gizon
$d^h\hat{g}^h- > gid^h-$	gizon
$e > e$	eseri, larru, belaun, sei
$e- > \emptyset-$	eta (> ta), behor
$eh_2 > a$	ba-, gaitz, haur
$eh_3 > e$	behi
$ei > e$	negu
$ell > ill$	-bil
$en > an$	ibai
$er > ar$	gar, izar, larru, ardi, harri, garai
$\hat{g} > g$	argi, egin
$g^w- > b-$	behi, bizi, buztan
$g^{wh} > g$	negu, gar
$h_1e > e$	eta, errun, hezur, ardi
$h_2(e) > a / i$	argi, ala, ale, ibai, izar, aintzin, ardo
$h_{2/3}o > o$	oro, oso
$h_3C > oC$	hortz
$h_3eu > o$	otz
$i > i$	argi, ebri, bizi
$iV > i$	bizi
$k^w > k / b$	ikusi, -bil, ba-, belaun, behor
$l > l$	oro, orein, larru, ilun, behor, ardi, ardo, urzo, ortzi, hiri
$lC > ll$	ala, ale, -bil, ile, ule
ly > rr	gorri
my > n	gizon
$n > n$	egin, ihi, orein, ibai, aintzin, hezur, belaun, ardo, oin, hagin?
$\eta C > eC / iC$	ebri, ilun, hortz
$\eta V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan, urzo, gorri
$ou > u$	ilun, uzu

The core evidence

p- > Ø-, VpV > VV	larru, haur, uzu, urzo, ortzi, harri, hatz, oin, ile, hiri, gain, garai, goi, go(i)ra, goiz, igan, gero
r > r	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur, ardi, haur, ortzi, harri, garai, gero
rw > rr	zorri, harri
s > s / z	zorri, eseri, ikusi, sei, urzo
sd ^h > zt	buztan
sn- > n-	negu
st > z	izar, txori
swVr > sVrw	zorri
t > t	eta, ardi, ardo
Tr > rr	larru, errun
Tu > tsu > (t)z(u/i)	aintzin, hezur, otz, zulo, zur, bizi, itz, gaitz, hortz?, uzu, ortzi, hatz
ū > au	belaun
u > u	zulo, haur, ule
uh ₁ > u	ur
VdV > VrV	eseri
VdV > VV	oin
VKC- > ViC	itz, gaitz, sei
VrtV > VrdV	ardi, ardo
VrVC > VrC	ardi, ardo, oso, hortz, urzo, ortzi
-Vs > -V	sei, aho
w > g	gaitz, gain, garai, goi, go(i)ra, goiz, igan, gero, gazte, gorri, igari, hagin?, hegal?
yVi > i	ihi, itz

Verbs in *e-...-(k)i

*e-...-i is a very common circumfix for perfective participles (the citation form of Basque verbs); *e- may shift to i- or j- (see T 150 for details). Some verbs take the circumfix *e-...ki (see T 215, 227-228).

We have seen two such verbs already: **eseri** and **ikusi**; here are some more.

58. ebaki, ebagi (B)

'to cut'

PRE-BASQUE: *-ba- 'to cut' (*recte* *-bag-)

PROTO-BASQUE: *-bag-

PIE: *b^h(e)h₂g- 'to divide, distribute'

OTHER IE LANGUAGES: Sanskrit **bhájati** 'divides, distributes'

COMMENT: **ebaki** has -ki ending (T 227): *b^h(e)h₂g- > *-bag-, plus *e-...-ki circumfix > *e-bag-ki > ebaki / ebagi.

SOURCES: T 103, 135, 178, 227; T-E 26-27, 160, 250, 386, 391; M-A 318; B 1543; IEW 107; LIV 65; JIES #19; DICT 49

59. jalgi (LN), jalki (G, HN), elki (S), ilki (L, LN, S)

'to go out'

PRE-BASQUE: *e-elki 'to go out' (*recte* *e-el-ki < root *-el-)

PROTO-BASQUE: *el-

PIE: *h₁el(h₂)- 'to go, drive, move'

OTHER IE LANGUAGES: Armenian **elanem** 'to go out'; Greek **elaúnō** 'to drive'

COMMENT: -ki is a common verbal extension: the Pre-Basque root is *-el-.

SOURCES: T 154, 155, 295; T-E 241, 250, 396, 398; M-A 397; MART 248; IEW 306f; LIV 235; JIES #223; DICT 96

60. ikuzi

'to wash'

PRE-BASQUE: N/A (*recte* *-kuz(i)-)

PROTO-BASQUE: *-kutsu-

PIE: *ǵ^heu-d- 'to pour' > *ǵ^hud-o-

OTHER IE LANGUAGES: Latin **fundō** 'to pour', Gothic **giutan** 'to pour'

COMMENT: *ǵ^hudo- > *ǵ^hudu- > *ǵ^hutsu- > *-kutsu- > *-kuzi-.

SOURCES: T 150; T-E 221; M-A 394; V 249; KR 177; B 1627-1629; IEW 447f; LIV 179f; JIES #52; DICT 84

61. **ireki** (G, LN), **iregi** (Sout), **irigi** (old B), **iriki** (B, G, LN, R), **edeki** (L, LN), **ideki** (HN, L, LN, S), **idéki** (Z), **idiki** (G, R)

'to open'

PRE-BASQUE: ***e-re-ki** / ***e-de-ki** / ***e-rek-i** / ***e-dek-i** 'to open' (*recte* ***e-re-ki** < root ***-re-**)

PROTO-BASQUE: ***reu-**

PIE: ***(h_x)reuh_x-** 'to be open'

PROTO-CELTIC: ***rowesyā** 'field, open ground'

CELTIC: Old Irish **róe** 'flat field, open land'

OTHER IE LANGUAGES: Tocharian A, B **ru-** 'to open', Avestan **rauuah-** 'open space', Latin **rūs** 'country, land' (< *reuh_x-os 'open space, field'), Gothic **rum** 'spacious' (< *h_xruh_x-mo-), English **room**

COMMENT: *reuh_x- > *reu- > *re-.

SOURCES: T 150; T-E 229, 396, 398; M-A 287; M 315; V 531; AD 536; KR 418; IEW 874; LIV 510; JIES #220; DICT 89

62. isuri

'to pour (out)'

PRE-BASQUE: ***-sur-** 'to pour (out)'

PROTO-BASQUE: ***sur(u)-**

PIE: ***sreu-** 'to flow'

PROTO-CELTIC: ***sruto-** 'stream, flow'

CELTIC: Old Irish **sruth** 'stream, flow'

OTHER IE LANGUAGES: Greek **rhéō** 'to flow', Greek **rhutós** 'pouring out'; Sanskrit **srávati** 'flows', English **stream**

COMMENT: from zero-grade *sru- > (anaptyxis) *suru-.

SOURCES: T-E 21, 231, 396, 398; M-A 394; M 353; V 558; B 1281-1282; KR 483; IEW 1003; LIV 588; JIES #221; DICT 90

63. izeki

'to burn'

PRE-BASQUE: ***-ze-** (*recte* ***-zeg-?**) 'burn'

PROTO-BASQUE: ***-θeg-**

PIE: ***d^heg^{wh}-** 'to burn'

PROTO-CELTIC: ***deg^w-ye-** 'to burn'

CELTIC: Welsh **deifio** 'burn', Old Irish **daig** 'flame'

OTHER IE LANGUAGES: Old Church Slavonic **žegŏ** 'I burn', Tocharian B **tsäk-** 'to burn'

COMMENT: *d^heg^{wh}- > *-θeg- > *-zeg-; **izeki** has **-ki** ending: *e-zeg-ki > izeki.

SOURCES: T 178, 228; T-E 236, 385, 394; M-A 124; M 93; DERK 554; AD 733; IEW 240f; LIV 133f; JIES #158; DICT 94

64. etorri

'to come'

PRE-BASQUE: ***-torr-** 'come'

PROTO-BASQUE: ***-torr-**

PIE: ***terk^(w)-** 'to twist'

OTHER IE LANGUAGES: Latin **torqueō** 'to twist, wind, turn', Sanskrit **tark-** 'to turn'

COMMENT: from strong grade ***tork^(w)-**; semantics: 'turn' > 'come back'.

SOURCES: T 178; T-E 33, 183, 386, 394; M-A 234; V 624; K 842; AD 294-295; IEW 1077; LIV 635; JIES #30; DICT 66

65. egarri

'thirst, thirsty'

PRE-BASQUE: ***egarr-i** 'thirsty' (*recte* ***e-garr-i**)

PROTO-BASQUE: ***-galyV-**

PIE: ***(h₁)g^{wh}el-** 'to wish, want' + ***-yV-** extension

OTHER IE LANGUAGES: Greek **(e)thélō** 'to wish', Old Church Slavic **želěti** 'wish, want'

COMMENT: a participial form (e-garr-i): ***g^{wh}elyV-** > ***gelyV-** > ***galyV-** > ***-garr-**.

SOURCES: T-E 20, 163, 215, 389, 392; M-A 342; B 377; DERK 555; IEW 489; LIV 246; JIES #232; DICT 51

66. utzi (Sout, G, HN, L, LN), eitzi (old Z, R), eitzu (R), etxi (old B, Sout), eutzi (old G, S), itxi (B), iutzi (HN)

'to leave'

PRE-BASQUE: ***e-utz-i** 'to leave'

PROTO-BASQUE: ***ōutsu-**

PIE: ***d(e)uh₂-** / ***du(e)h₂-** 'to leave, go away; far, long'

OTHER IE LANGUAGES: Sanskrit **dāvati** 'goes', Sanskrit **dū-rá-** 'far', Greek **dén** 'far', Hittite **tūwa** 'far'

COMMENT: ***duh₂-to-** > ***dutsu-** > ***ōutsu-** > ***utzu-** > ***-utzi**.

SOURCES: T 154, 178; T-E 21, 32, 36, 159, 362, 396, 399; M-A 401; V 181; B 326; K 904; IEW 219f; JIES #228; DICT 129

Summary of sound laws identified so far

This table cumulates sound laws and evidence from previous sections (in black) with sound laws and evidence from current section (in red):

Sound law	Evidence
b ^h > b	ebri, ibai, ebaki
CC- > CVC-	gizon, isuri
Cl > ll	ilun, zulo, belaun
Cn > nn	ilun
d ^h > z	gizon, izeki
d ^h ġ ^h - > gid ^h -	gizon
e > e	eseri, larru, belaun, sei, izeki, egarri
e- > Ø-	eta (> ta), behor
eh ₂ > a	ba-, gaitz, haur, ebaki
eh ₃ > e	behi
ei > e	negu
ell > ill	-bil
en > an	ibai
er > ar	gar, izar, larru, ardi, harri, garai, egarri
eu > e	ireki
ġ > g	argi, egin
ġ^h > k	ikuzi
g ^w - > b-	behi, bizi, buztan
g ^{wh} > g	negu, gar, egarri
h ₁ e > e	eta, errun, hezur, ardi, jalgi
h ₂ (e) > a / i	argi, ala, ale, ibai, izar, aintzin, ardo
h _{2/3} o > o	oro, oso
h ₃ C > oC	hortz
h ₃ eu > o	otz
i > i	argi, ebri, bizi
iV > i	bizi
k ^w > k / b	ikusi, -bil, ba-, belaun, behor
l > l	oro, orein, larru, ilun, behor, ardi, ardo, urzo, ortzi, hiri, jalgi
lC > ll	ala, ale, -bil, ile, ule
ly > rr	gorri, egarri
my > n	gizon
n > n	egin, ihi, orein, ibai, aintzin, hezur, belaun, ardo, oin, hagin?
ŋC > eC / iC	ebri, ilun, hortz

The core evidence

$\eta V > enV$	ibai
$o > o / u$	negu, zorri, txori, larru, zulo, zur, buztan, urzo, gorri, etorri
$ou > u$	ilun, uzu
$p- > \emptyset-, VpV > VV$	larru, haur, uzu, urzo, ortzi, harri, hatz, oin, ile, hiri, gain, garai, goi, go(i)ra, goiz, igan, gero
$r > r$	argi, ebri, ur, gar, izar, txori, larru, errun, zur, hezur, ardi, haur, ortzi, harri, garai, gero, ireki, isuri
$rC > rr$	etorri
$rw > rr$	zorri, harri
$s > s / z$	zorri, eseri, ikusi, sei, urzo, isuri
$sd^h > zt$	buztan
$sn- > n-$	negu
$st > z$	izar, txori
$swVr > sVrw$	zorri
$t > t$	eta, ardi, ardo, etorri
$Tr > rr$	larru, errun
$Tu > tsu > (t)z(u/i)$	aintzin, hezur, otz, zulo, zur, bizi, itz, gaitz, hortz?, uzu, ortzi, hatz, ikuzi, utzi
$\bar{u} > au$	belaun
$u > u$	zulo, haur, ule, ikuzi
$uh_{1/2} > u$	ur, utzi
$VdV > VrV$	eseri
$VdV > VV$	oin, utzi
$VKC- > ViC$	itz, gaitz, sei
$VrtV > VrdV$	ardi, ardo
$VrVC > VrC$	ardi, ardo, oso, hortz, urzo, ortzi
$-Vs > -V$	sei, aho
$w > g$	gaitz, gain, garai, goi, go(i)ra, goiz, igan, gero, gazte, gorri, igari, hagin?, hegal?
$yVi > i$	ihi, itz

Summary of core evidence

By applying very simple sound laws, amply attested elsewhere in IE, we have accumulated more than 60 etymologies already, from all parts of basic lexicon:

body parts	larru 'skin, hide', arraultza 'egg', hezur 'bone', buztan 'tail, penis', belaun 'knee', aho 'mouth', hortz 'incisor tooth', hatz 'paw', oin 'foot', ile 'hair', ule 'wool', hegal 'wing'
people	gizon 'man, person', haur 'child', gazte 'young person'
animals	zorri 'louse', orein 'deer', txori 'bird', behi 'cow', behor 'mare', ardi 'sheep, ewe', urzo 'pigeon, dove'
plants	ale 'grain, seed', ihi 'reed, rush', zur 'wood'
other natural entities	ebri 'rain', ur 'water', negu 'winter', gar 'flame', ibai 'river', izar 'star', zulo 'hole', ortzi 'thunder', harri 'stone', hagin 'yew'
verbs	eseri 'sit down', egin 'do, make', ikusi 'see', errun 'lay eggs', igan 'ascend', igari 'swimming', ebaki 'cut', jalgi 'go out', ikuzi 'wash', ireki 'open', isuri 'pour', izeki 'burn', etorri 'come', utzi 'leave'
adjectives	argi 'bright', oro 'all', ilun 'dark', otz 'cold', bizi 'alive', -bil 'round', gaitz 'bad', oso 'whole', garai 'high', gorri 'red', egarri 'thirsty'
conjunctions	eta 'and', ala 'or', ba- 'if'
spatial relationships	aintzin 'in front of', gain 'top', go(i)ra 'up'
miscellanea	itz 'word', ardo 'wine', buztarri 'yoke', uzu 'panic', hiri 'town', sei 'six'

The probability that all these etymologies are loans, chance coincidences, or simply wrong is extremely low. A few might be – but not all of them.

So, the case for Basque as an IE language should be secured by now.

The rest of this paper will briefly illustrate:

- additional etymologies based on less obvious and/or less well-supported sound laws;
- a summary of sound laws linking PIE to Pre-Basque.

Additional etymologies

This sections briefly illustrates additional etymologies based on less obvious and/or less well-supported sound laws.

Etymologies with *sw- > b-

The Basque-IE correspondences listed below seem to point to *sw- > b-. There are at least two counter-examples, though: **zorri** 'louse' < *swor- (see above) and **erran** < *e-serr-en < *swer- 'to say' (see below). These might be cases of an early metathesis (*swVr- > *sVrw-), or they might be loans, or else these etymologies are incompatible and some must therefore be rejected: the case is still open.

67. ber-

'self'

PRE-BASQUE: **ber-** (*recte* *belV / *be-de?)

PROTO-BASQUE: *be-IV / *be-de ?

PIE: *swe 'self'

PROTO-CELTIC: *swe- 'self, own'

CELTIC: Old Irish **féin** 'self, own' (< *swe-sin)

OTHER IE LANGUAGES: Latin **sē** 'him-/her-/itself'

COMMENT: *swe- > be- is regular. As for -r-, two explanations are possible: if -r- < *-d- (with common rhotacism of intervocalic *d), it may go back to *swe-de (> *bede > *bere), with the same *-de- extension as e.g. in Old Irish **faresin** 'himself' < *swe-de-sin; otherwise, if -r- < *-l- (with regular rhotacism of intervocalic *-l-) then it may go back to PIE *s(w)e-IV- (> *belV- > ber-), seen in Latin **sōlus** 'alone' according to IEW 882f (but V 573 rejects this etymology) and possibly in English **self** (if < *s(w)e-l-b^ho-).

SOURCES: T 97; T-E 135, 388, 392; M-A 417; M 361; V 549; B 365; KR 432; IEW 882f; JIES #12; DICT 41

68. barre (B Sout S), barra (LN R), farra (G HN L), farre (G HN), parra (G), parre (B G)

'smile, laughter'

PRE-BASQUE: *barre 'smile (n.), laughter'

PROTO-BASQUE: *bary- / *bard-

? PIE: *swer- 'to make a sound' / PIE *sward- 'to laugh'

PROTO-CELTIC: *swar-yo- 'to laugh'

CELTIC: Middle Welsh **chwerthin** 'to laugh', Old Cornish **hwerthin** 'laughter'

OTHER IE LANGUAGES: English **swear**?

COMMENT: the ultimate PIE origin of the Celtic words is debated, but the common origin of Celtic and Basque reflexes is very likely, both phonetically and semantically (*swery- > barr- is regular).

SOURCES: T 132; T-E 27, 127, 389, 391; M-A 362; M 361; KR 496; IEW 1049f; LIV 613; JIES #9; DICT 35

69. bero

'hot; heat (n.)'

PRE-BASQUE: ***bero** / ***belo** 'heat, hot' (*recte* ***belo**)

PROTO-BASQUE: ***bel-**

PIE: ***swel(h_x)-** 'to burn'

OTHER IE LANGUAGES: Greek **hḗ(i)lē** 'heat of the sun'; Old English **swelan** 'to burn; perish with heat'

SOURCES: T 99, 177, 210; T-E 136, 387, 392; M-A 124; B 385; KR 498; IEW 1045; LIV 609; JIES #13; DICT 42

70. mehe (L LN), méhẽ (Z), mee (B HN), me (B G HN S R), be (Sout)

'thin'

PRE-BASQUE: ***bene** 'thin, slender'

PROTO-BASQUE: ***ben-e**

PIE: ***sweng-** 'to bend'

PROTO-CELTIC: ***swengo-** 'thin'

CELTIC: Middle Irish **seng** 'thin'

OTHER IE LANGUAGES: Middle High German **swanc** 'flexible, thin'

COMMENT: assuming *-ng- > *-n- (possibly via *[ŋ]).

SOURCES: T-E 286, 389, 392; M-A 383, 384; M 363; JIES #66; DICT 104

Etymologies with *dw- > b-

*dw- is very rare in PIE, so evidence for this sound law is inevitably limited.

71. **bi** (c), **bia** (old L), **bida** (HN LN S), **biga** (L LN)

'two'

PRE-BASQUE: ***biga** '2'

PROTO-BASQUE: ***bew-a** (neuter), ***bi** (fem.)

PIE: ***dwéh₁(u)**, ***dw-ih₁** (fem.) '2'

PROTO-CELTIC: ***dwāw** (masc.), ***dwī** (fem.) '2'

CELTIC: Old Irish **dáu**, **dī**, **da** '2 (m., f., n.)'

OTHER IE LANGUAGES: Latin **bis**, Avestan **biš** 'twice'; Umbrian **tuva** '2' (nom., acc., neuter); Old Church Slavonic **два** '2', Gothic **twa** '2 (neuter)', English **two**

COMMENT: *dweh₁u > *beu + -a (neuter ending) > *bewa > *bega > biga (by analogy with *dwih₁ > bi, originally feminine).

SOURCES: T 173, 175, 272, 273; T-E 42, 138, 389, 392; M-A 61, 97, 308, 310, 316; M 110, 111; V 72, 183; DERK 130; KR 529; IEW 228f; JIES #15; DICT 43

72. **on** (c excl. Z), **hon** (old LN), **hun** (Z)

'good'

PRE-BASQUE: ***bon** / ***on** 'good' (*recte* ***bon**)

PROTO-BASQUE: ***bon**

PIE: ***dweno-** / ***duh_{2/3}-eno-** / ***d(h₃)eu-** 'good, favourable'

PROTO-CELTIC: ***dweno-** 'strong'

CELTIC: Middle Irish **de(i)n** 'pure, clean, firm, strong'

OTHER IE LANGUAGES: Latin **bonus** 'good'

COMMENT: not a Latin loan, according to T-E 309. The exact shape of the PIE root is disputed; Basque points to *duh₃en- > *duon- > *dwon- > *bon.

SOURCES: T 133, 142; T-E 20, 309, 387, 394; M-A 413; M 110; V 73-74; IEW 218f; JIES #71; DICT 111

Etymologies with palatalization of sibilants

Pre-Basque had two sets of sibilants and corresponding affricates: <s> and <ts> are apico-alveolar, whereas <z> and <tz> are lamino-alveolar.

Fortes	-tz- -tz	-ts- -ts
Lenes	z- -z-	s- -s-

Lenes never occurred word-finally. Fortes never occurred word-initially.

Apico-alveolar phonemes seem to derive from lamino-alveolar ones via palatalization, caused by a preceding or following palatal vowel /e, i/, though not all details are clear.

We have encountered several examples already:

- without palatalization: **zorri** (< *sorw-), **urzo** (< *poluso-)
- with palatalization: **eseri** (< *esedi), **ikusi** (< *^wis-), **sei** (< *seis)

Additional examples where a preceding or following *e/i palatalizes an adjacent sibilant are listed below.

73. itsu (B HN L LN S), itxu (G), utsi (R)

'blind'

PRE-BASQUE: ***itsu** 'blind'

PROTO-BASQUE: ***antsú-**

PIE: ***h₂endhó-** 'blind'

CELTIC: Gaulish **anda-bata** 'a gladiator who fights blind with a helmet without eye-openings'

OTHER IE LANGUAGES: Avestan **anda-** 'blind', Sanskrit **andhá-** 'blind'

COMMENT: *h₂endhó- > *andhó- > *andhú- > *antsú- > *intsú- > itsu

SOURCES: T-E 232, 385, 393; M-A 197; JIES #235; DICT 91

74. su

'fire'

PRE-BASQUE: ***su** 'fire'

PROTO-BASQUE: ***aitsú**

PIE: ***h₂eidh-o-** 'firewood' < ***h₂eidh-** 'to burn, kindle'

PROTO-CELTIC: ***aydu-** 'fire'

CELTIC: Old Irish **áed** 'fire', Middle Breton **oaz** 'ardor'

OTHER IE LANGUAGES: Greek **aĩthos** 'fire', Greek **aithós** 'burnt', Sanskrit **inddhé** 'to kindle', Middle High German **eit** 'fire'

COMMENT: *h₂eidhó- > *aidhó- > *aidhú- > *aitsú > *etsú > *tsu > su (as *fortis* *ts- cannot be word-initial in Pre-Basque: T 139).

SOURCES: T 137, 139, 173, 178, 311; T-E 342, 386, 394; M 51; V 25; B 37; KR 8; IEW 11; JIES #77; DICT 120

75. ats, hats

'breath'

PRE-BASQUE: *N/A* (*recte* *anets)

PROTO-BASQUE: *anetsu

PIE: *h₂enh₁- 'breath' + *-to-

PROTO-CELTIC: *anatlā 'breath'

CELTIC: Old Irish **anal**, Middle Welsh **anadl**

OTHER IE LANGUAGES: Latin **animus** 'mind, spirit'

COMMENT: *h₂enh₁-to- > *aneto- > *anetsu > *anets; subsequent regular loss of intervocalic *n in Basque.

SOURCES: T 283; T-E 113; M 34-35; V 43; IEW 38f; LIV 267; JIES #7; DICT 31

76. sartu

'to go in, to enter, to insert'

COMMENT: -tu is usually diagnostic of **Latin** loans, and Latin **insĕro** 'I insert, let in' is a very good candidate, via INSERTU > *isertu > sartu; the *i- also explains s- instead of **z-. Also compare **sortu**.

SOURCES: T 295; T-E 46, 337, 387, 394; JIES #141; DICT 118

77. sortu

'to be born'

PRE-BASQUE: *sor- 'be born'

COMMENT: -tu is usually diagnostic of **Latin** loans, and Latin **exōrior** 'to appear, derive, spring out' is a likely candidate, via EXORTU > *esortu > sortu; initial *e- also explains s- instead of **z-. Also compare **sartu**.

SOURCES: T 137; T-E 342, 385, 394; JIES #142; DICT 119

78. sudur (G HN L LN R), sūdūr (Z), suur (B), sur (c)

'nose'

PRE-BASQUE: *sudur 'nose'

PROTO-BASQUE: *ensuduru

PIE: *h₃ed- 'to smell' > *h₁en-s-h₃e/od-o-ro- 'having smell inside'

OTHER IE LANGUAGES: Latin **odor** 'smell, odour', Greek **od-** 'smell'; Greek **eis** 'towards' (< PIE *h₁en-s), Venetic **es** 'unto' (< *h₁en-s)

COMMENT: *h₁ensh₃e/odoro- > *ensodoro- > *ensuduru- > *esuduru > *sudur. This etymology was suggested by Guido Borghi (personal communication). Compare **eman** 'to give', **entzun** 'to hear' and **itsaso** 'sea' for similar compounds.

SOURCES: T 131, 173, 286; T-E 19, 342, 388, 394; M-A 336; V 300, 425-426; B 394; 1050-1051; IEW 772f; LIV 296; JIES #78; DICT 120

79. sehi (L LN), sei (G L), seĩ (old B), sein (unified Basque), segi (Sout)

'boy, child'

PRE-BASQUE: ***seni** 'boy, child'

PROTO-BASQUE: ***seun-**

PIE: ***suh_x-nu-** 'son' < PIE ***seuh_x-** 'to beget'

OTHER IE LANGUAGES: Old High German **sun**, English **son**, Old Prussian **souns**, Sanskrit **sūnú-**, Russian **syn** 'son'

COMMENT: ***suh_x-nV-** > ***sūn-** > ***seun-** > ***sen-** + **-i** adj. suffix. For ***uh_x** > ***ū** > ***eu** compare **euli** 'fly'. Basque **seme** 'son' < Pre-Basque ***sen-be** has the same origin. Also see **suin** 'son-in-law', below.

SOURCES: T 133, 140, 177, 188, 269; T-E 123, 338, 339, 385, 386, 394; M-A 211; DERK 483; KR 492; IEW 913f; LIV 538; JIES #75; DICT 119

Verbs with *e-...-en circumfix

T 103 cites an 'anomalous class of verbs in -n', including **joan** 'go', **egin** 'do', **esan** / **erran** 'say' and **eman** 'give', then T 212-213 tries to unify this verb class with verbs in *e-...-i (see above). This is probably not necessary: I posit Pre-Basque could also form perfective participles with an *e-...-en circumfix, where *e- > e-/i-/j- (as with *e-...-i circumfix), while *-en > -n / -an. We have already encountered two verbs that might follow this pattern: **errun** 'lay eggs' and **egin** 'do, make'. Additional cases are listed below.

Intriguingly, this hypothetical *e-...-en circumfix for Pre-Basque perfective participles happens to resemble a similar, widespread Germanic circumfix for perfective participles, appearing e.g. as ga-...-an in Gothic, as gi-...-an in Old Saxon and Old High German, as ge-...-en in Modern German, and as ge-...-an in Old English (where ge- was pronounced /je/, then became i- in Middle English, and eventually disappeared in Modern English). Whether this is just a chance resemblance or a result of early contacts with Germanic populations, it is too early to tell.

80. edan (c), eran (B G R)

'to drink'

PRE-BASQUE: *-da[n]- 'drink' (*recte* *-de- > *e-de-an)

PROTO-BASQUE: *-de-

PIE: *d^heh₁- 'to suck'

PROTO-CELTIC: *di-na- 'to suck'

CELTIC: Middle Welsh **denu** 'to suck'

OTHER IE LANGUAGES: Armenian **di-em** 'to suck; drink mother's milk'; Sanskrit **dháyati** 'sucks', Middle High German **tien** 'to suck, suckle'

SOURCES: T 136, 178; T-E 28, 160, 386, 392; M-A 256; M 99; V 209-210; KR 95; MART 239; IEW 241f; LIV 138f; JIES #20; DICT 50

81. esan, erran

'to say'

PRE-BASQUE: *eser(r)an / *esran 'to say' (*recte* *-serr-)

PROTO-BASQUE: *-serw-

PIE: *(s)wer(h₁)- 'to say, speak'

OTHER IE LANGUAGES: Greek **eírō** 'to say', Hittite **wer(iye/a)-** 'to call, to name, to summon', Palaic **wer-** 'to say, to call'

COMMENT: *-swer- > *-serw- > *-serr-, with the same metathesis (*swVr- > *sVrw-) as in **zorri** 'louse' (otherwise *sw- would yield **b-).

SOURCES: T 103, 164; T-E 180, 388, 392; M-A 353; B 393; K 1002; IEW 1162f; LIV 689f; JIES #28; DICT 64

82. izan

'to be'

PRE-BASQUE: ***(i)zan-** 'to be' (*recte* ***-z-**)

PROTO-BASQUE: ***(e)s-**

PIE: ***h₁(e)s-** 'to be'

PROTO-CELTIC: ***es-** 'to be'

CELTIC: Old Irish **is**, Old Welsh **is**, Old Breton **is** 'is'

OTHER IE LANGUAGES: Latin **(e)s-** 'to be', Sanskrit **(a)s-** 'to be', Gothic **(i)s-** 'to be', English **is**

COMMENT: izan is to be analyzed as i-z-an < *e-z-an: the root is -z- < zero grade *h₁s- (otherwise *h₁es- would have yielded **isan).

SOURCES: T 104, 154, 232; T-E 21, 32, 235, 385, 393; M-A 368-369; M 118; V 599; KR 582; IEW 340f; LIV 241f; JIES #57; DICT 93

83. jan

'to eat'

PRE-BASQUE: ***-a[n]-** (*recte* ***-e-**) 'eat'

PROTO-BASQUE: ***-eð-**

PIE: ***h₁ed-** 'to eat'

PROTO-CELTIC: ***ed-o-** 'to eat'

CELTIC: Old Irish **ithid** 'eats'

OTHER IE LANGUAGES: Latin **edō**, Old High German **ezzan**, English **eat**, Hittite **ed-**

COMMENT: *h₁ed- > *ed- > *eð- > *e- plus *-...-en circumfix > *e-e-an > jan (compare *eelki > jalki). **Jakin** 'to know' has the same origin: **jan** 'eat', with **-kin** ending; semantics: 'taste' > 'know' (etymology by Lafitte, reported in T 227), with clear Romance semantic parallels: Latin **sapere** 'to taste' > Spanish **saber**, French **savoir**, Italian **sapere** 'to know'.

SOURCES: T 154, 155, 161, 227; T-E 35, 240, 241, 386, 391, 396, 398; M-A 254; M 113; V 185; KR 119; K 261; IEW 287f; LIV 230f; JIES #59, #60; DICT 96

84. joan (c), fan (B G HN R S A), fuan (B), gan (L HN), goan (HN L), xoan (R)

'to go'

PRE-BASQUE: ***-o(C)an-** (*recte* ***-on-**) 'go'

PROTO-BASQUE: ***-von-**

PIE: ***menh_x-** 'to tread, stamp on' / PIE ***meih_x-(n-)** 'to go'

PROTO-CELTIC: ***mon-ī-** 'to go'

CELTIC: Gaulish **moni** 'go!', Middle Breton **monet** (verbal noun), Cornish **mones** (verbal noun)

OTHER IE LANGUAGES: Umbrian **menes** 'you will come', Old Church Slavonic **minqti** 'to pass', Latin **meō** 'to go, wander'

COMMENT: strong grade *monh_x- > *von- > *on- (for loss of *m via *v see below) plus *-...-en circumfix > *e-on-an > *e-o-an > ioan > joan.

SOURCES: T 103, 154, 178; T-E 17, 38, 387, 393; M-A 397; M 276; DERK 318; IEW 710, 726; LIV 426; JIES #63; DICT 97

85. entzun

'to hear'

PRE-BASQUE: ***e-nezun** 'to hear' (*recte* ***-enezu-**)

PROTO-BASQUE: ***-eneusu-**

PIE: ***h₁en** 'in' + PIE ***h₂eus-** 'ear'

PROTO-CELTIC: ***aws-os-** 'ear'

CELTIC: Old Irish **au** 'ear'

OTHER IE LANGUAGES: Latin **auris** 'ear'; Greek **enōtizomai** 'listen', Gothic **auso** 'ear', English **ear**

COMMENT: ***h₁en-h₂eus-o-** > ***eneuso-**¹² > ***-eneuzu-** > ***-enezu-**. For similarly-built words, compare Greek **enōtizomai** 'listen' < **en** 'in' + **ōt-** 'ear' (from the same PIE root), and, within Basque, **eman** 'to give' and **sudur** 'nose'.

SOURCES: T 178; T-E 171; M-A 175; M 48-49; V 63; KR 44; IEW 785; JIES #24; DICT 57

¹² with ***h₂eu** > ***eu** as in **edo** 'or'; or else with ***Ch_xV-** > ***CV-** as in **behi** 'cow'

Etymologies with *y > g

Evidence is limited. Examples may include:

86. **gibel** (c), **bigel** (HN)

'liver'

PRE-BASQUE: ***gibel**

PROTO-BASQUE: ***gebel**

PIE: ***yek^w-r** 'liver'

OTHER IE LANGUAGES: Greek **hēpar** 'liver', Latin **iecur** 'liver'

COMMENT: *yek^wr > *yebr̥ > *yeber > *yebel > *gebel. For *-r > -l compare **hil** 'dead'.

SOURCES: T 285; T-E 205, 387, 393; M-A 187; V 296; B 522; IEW 504; JIES #39; DICT 76

87. **egotzi**

'to throw'

PRE-BASQUE: *-**gotz-** 'to throw'

PROTO-BASQUE: *-**gotsu-**

PIE: ***(h_x)yeh₁-** 'to throw'

OTHER IE LANGUAGES: Latin **iaciō** 'to throw', Greek **híēmi** 'to throw'; Hittite **pe-je-** 'to send'

COMMENT: *yoh₁-to- > *yotsu- > *gotsu- > *gotzi.

SOURCES: T-E 21, 165, 389, 393; M-A 389; V 292; B 581; K 663; IEW 502; LIV 225; JIES #209; DICT 53

More etymologies with *st > z

The best evidence for *st > z is **izar** 'star', to which ***zori** 'bird' (< *stor-) may be added (see above).

Additional interesting etymologies may include the following.

88. **ez** (c), **ze** (old B)

'not, no'

PRE-BASQUE: ***eze** 'not, no'

PROTO-BASQUE: ***en-sí** 'it is not'

PIE: ***ǵ-** / **ne** 'not' + PIE ***h₁(e)s-tí** 'is'

PROTO-CELTIC: ***ne, nī, nī** 'not'

CELTIC: Old Irish **nī, nī**, Old Welsh **nī**, Old Breton **ne**, Cornish **ny** 'not'

OTHER IE LANGUAGES: Latin **nē**, Gothic **ni**, Old Frisian **en**, Middle High German **en**, etc., 'not'

COMMENT: a perfect parallel can be found in Celtic: in Goidelic and Brittonic, **nī** 'not' causes the gemination of the following consonant; according to M 286, this derives from ***ni esti** 'it is not (the case that)' > ***ni ess**. Interestingly, T 209 also posits that **ez / ze** derives from an ancient verb form, with vowel loss. Additionally, William Croft ("The Evolution of Negation" in *Journal of Linguistics* 27: 1-27), has shown that a marker of negation, combining with a verb 'to be', may be reinterpreted as a simple negation. Phonetically, Basque **ez / ze** must derive from zero-grade PIE root ***h₁s-** (as in **izan** 'to be')¹³.

The phonetic evolution probably was ***ǵ-** 'not' + ***h₁stí** 'is' > ***e(n) zi** 'is not' > **ez / ze**.

SOURCES: T 98, 209; T-E 7, 187, 388, 392; M 118, 286; V 403; KR 385; IEW 340f, 756; LIV 241f; JIES #32; DICT 68

89. **zingira**

'lake, swamp'

PRE-BASQUE: *N/A (recte *zingira)*

PROTO-BASQUE: ***sangira**

? PIE: ***steh₂(n)g-** 'shallow water, swamp'

PROTO-CELTIC: ***stagrā** 'river, stream'

CELTIC: Old Breton **staer** 'river, stream'

OTHER IE LANGUAGES: Latin **stāgnum** 'pool, swamp'

COMMENT: ***st(e)h₂ng-** + ***-(V)rV-** extension as in Celtic: ***steh₂ng-(V)r-** > ***stangVr-** > ***sangVr-** > ***zangVr-** > ***zingVr-**. See DICT for a detailed discussion.

SOURCES: T 311, 314; M-A 128; M 353-354; V 585; IEW 1010; JIES #82; DICT 135

¹³ if full grade ***h₁es-** had been the source, it would have yielded an apical sibilant ****s-**, instead of the attested laminal sibilant **-z-**

90. zain

'watchful, vigilant; guard, guardian, watchman'

PRE-BASQUE: ***zani** 'watchful, vigilant; guardian'

PROTO-BASQUE: ***savun-**

PIE: ***steh₂-** 'to stand' > PIE ***stéh₂-mōn-** 'what stands'

PROTO-CELTIC: ***si-sta-** 'to stand', Proto-Celtic ***tā-yo-** 'to stand'

CELTIC: Old Irish **sisidir** 'stands', Old Irish **at-tá** 'to be, find oneself'

OTHER IE LANGUAGES: Latin **statiō** 'standing place, guard', Sanskrit **sthāman-** 'position, standing-place, station, seat'

COMMENT: phonetic evolution is perfectly regular: ***stéh₂mōn-** > ***stamōn-** > ***stavun-** > ***savun-** >¹⁴ ***saun-** + **-i** (adj. suffix) > ***sauni** > ***zauni** > ***zani**; semantically, we have 'standing' > 'standing firm or watchfully' > 'guarding', as in Latin **statiō** 'guard'.

SOURCES: T 140, 317; T-E 215, 367, 387, 389, 394; M-A 287, 296; M 338, 353; V 589; B 1390-1391, 1404; IEW 1004f; LIV 590f; JIES #238; DICT 133

¹⁴ for ***m** > ***v** > **Ø** see below

Etymologies with fricativization and eventual loss of some consonants

This is probably the most controversial set of sound laws linking PIE to Pre-Basque.

We have already accumulated quite a few IE-Basque etymologies so far, without using this set of sound laws, so the IE origin of Basque is secured even if one remains skeptical about consonant losses other than *p.

A very detailed analysis (including statistical evidence) for the validity of this set of sound laws can be found *passim* in JIES, incl. pages 41, 44, 47-48, 51, 61, 62, 67-68, 70, 94-104, 127-130, 142-152, 276, 298-299, 308.

Very briefly, the evidence that Basque lost word-initial, non-labialized plosives, plus *m in all positions, rests on three pillars:

1. the etymologies where such sound laws apply (see below);
2. the fact that Pre-Basque had *m at all and no initial *p-, *t-, *k-, *d-;
3. an interesting parallel with Celtic initial-consonant mutations, which involve the same sound changes as posited here for the evolution from PIE to Pre-Basque, thus providing solid evidence that this set of fricativizations can and does happen.

The loss of these proto-phonemes probably took place in two steps:

PIE > Proto-Basque fricativization:

p- > f- (possibly [ɸ])

b^h- > v- (possibly [β])

m > v (probably via [ṽ])

t- > θ-

d-, d^h- > ð-

k-, k̂- > x-

g^h-, ḡ^{h-15} > γ-

followed by Proto-Basque > Pre-Basque loss of fricatives:

f > ∅

v > ∅-

θ- > ∅-

ð > ∅

x- > ∅-

γ- > ∅-

¹⁵ exception: ḡ^hC- > gC- as in **gizon** 'man'

The first step (fricativization) closely resembles Celtic initial-consonant mutations:

<i>Initial mutation</i>	<i>is seen e.g. in</i>
p- > f-	Breton spirantization, Scottish Gaelic lenition
b- > v-	Welsh soft mutation, Breton lenition, Scottish Gaelic lenition
m- > v- / ʋ-	Welsh soft mutation (v-), Breton lenition (v-), Scottish Gaelic lenition (ʋ-)
t- > θ-	Breton (Vannetais) spirantization
d- > ð-	Welsh soft mutation, Breton lenition
k- > x-	Scottish Gaelic lenition
g- > ɣ-	Scottish Gaelic lenition

The second step (loss of fricatives) closely resembles the loss of fricatives in many Romance languages, such as French and Italian (especially, dialects of Northern Italy) – again, due to Celtic substrata.

Not all losses are supported by the same amount of evidence, as the list below clearly shows.

The loss of initial ***p-** is secured by ample evidence already listed above.

For the loss of ***b^h-**, only two (fairly uncertain) etymologies can be invoked:

91. **laster** (c), **laister** (G, L, LN), **laixter** (L LN)

'quick, fast; soon; speed'

PRE-BASQUE: ***laster** 'quick, soon' (*recte* ***razter**)

PROTO-BASQUE: ***v(e)rastero-**

PIE: ***b^hris-** / ***b^hers-** 'fast'

PROTO-CELTIC: ***bristi-** 'haste'

CELTIC: Middle Welsh **brys** 'hurry, haste', Middle Breton **bresic** 'swift'

OTHER IE LANGUAGES: Latin **festīnō** 'to hurry' (< ***fristī-no-**), Bulgarian **brǎz** 'fast, quick'

COMMENT: ***b^hrstero-** > ***v(e)rastero-** > ***razter** > ***raster** (apical assimilation: P18 in T-E 28) > **laster** (rhotic dissimilation: T 145 and P24 in T-E 29). See DICT for a detailed discussion.

SOURCES: T 145, 154; T-E 20, 28, 29, 33, 34, 263, 388, 393; M-A 303; M 78-79; V 216; DERK 70; IEW 143; JIES #224; DICT 100

92. **uko**

'forearm'

PRE-BASQUE: ***uko** 'forearm'

PROTO-BASQUE: ***vuk-**

PIE: ***b^heh₂ǵ^h-u-** '(fore)arm'

OTHER IE LANGUAGES: Tocharian B **poko** 'arm', Old English **bōg** 'arm, shoulder', Sanskrit **bāhú-** 'forearm, arm', Greek **pékhus** 'forearm, arm'

COMMENT: See DICT for a detailed discussion.

SOURCES: T 255; T-E 355, 386, 394; M-A 180; AD 403; B 1188; KR 71; JIES #164; DICT 125

The loss of ***m-** is supported by a sizeable amount of evidence:

93. **erle**

'bee'

PRE-BASQUE: ***erle** 'bee' (*recte* ***elile**)

PROTO-BASQUE: ***veli-l-**

PIE: ***mel-i(-t)** 'honey'

PROTO-CELTIC: ***meli** 'honey'

CELTIC: Old Irish **mil**, Old Welsh **mel**, Old Breton **mel**, Old Cornish **mel** 'honey'

OTHER IE LANGUAGES: Latin **mel** 'honey', Latin **mellārius** 'bee-keeper'; Greek **mélissa** 'bee', Armenian **meṭu** 'bee', Gothic **milib** 'honey'

COMMENT: with diminutive ***-IV-** extension: ***meli-l-** > ***velil-** > ***elil-** > (with regular rhotacism) ***eril-** > (syncope) **erl-**. For ***-VIVC-** > **-VrC-** compare **ardo** 'wine', **urzo** 'pigeon', **oso** 'all'.

SOURCES: T 296; T-E 18, 175, 385, 392; M-A 262; M 263; V 370; B 925; K 580; MART 461, 462; KR 363; IEW 724; JIES #102; DICT 60

94. ***hil-, *il-**

'moon'

PRE-BASQUE: ***illa / ille** 'moon, month'

PROTO-BASQUE: ***ven-IV-**

PIE: ***meh₁-n-** 'month, moon'

PROTO-CELTIC: ***mīns-** 'month'

CELTIC: Old Irish **mí**, Middle Welsh **mis**, Old Breton **mis**, Old Cornish **mis** 'month'

OTHER IE LANGUAGES: Lithuanian **mėnùlis** 'moon', Latin **mēnsis** 'month', English **moon**, English **month**, Greek **mén** 'month, moon-sickle', Tocharian B **meñe** 'moon, month'

COMMENT: **(h)il-** 'moon' is seen in **hilargi** 'moon' (where the second element is **argi** 'bright', which see) and in **hilabete** 'month' (where the second element is **bete** 'full'). PIE ***meh₁-n-(V)IV-¹⁶** > ***menIV-** > ***venIV-** > ***enIV-** > ***elIV** > ***illIV**. For ***(-)ell-** > ***(-)ill-** compare **ilun** 'dark', **ibili** 'to move', as well as **-i-** vocalism in Celtic cognates.

SOURCES: T 280, 312; T-E 223, 388, 393; M-A 128-129; M 272; V 373; KR 365; B 945; AD 468; IEW 703; JIES #107; DICT 84

¹⁶ with ***-IV-** extension as e.g. in Lithuanian

95. handi (L LN), hándi (Z), andi (B G HN), ándi (R), haundi (L LN), aundi (B)

'big, large, tall'

PRE-BASQUE: *[h]andi 'big'

PROTO-BASQUE: *vanti

PIE: *meh₁- 'measure' / *meh₁- 'to grow; large' > *m(e)h₁-nt-

PROTO-CELTIC: *mantī- 'quantity' / *māro- 'great'

CELTIC: Old Irish méit 'greatness, magnitude', Old Breton ment 'dimension, size', Middle Welsh maint 'size, quantity' / Old Irish már 'great', Old Welsh maur 'great'

OTHER IE LANGUAGES: Latin mētiōr 'to measure'

COMMENT: *m(e)h₁nt- > *ment- > *vent- > *ent- + -i 'adj. suffix' > *anti > *andi.

SOURCES: T 99, 142, 175; T-E 19, 94, 385, 391; M-A 311, 317, 320; M 256, 258; V 377; IEW 703f, 704; LIV 424f; JIES #104; DICT 24

96. ahantzi (L, LN), ahanzi (old LN), aantzi (HN), ahanze (old LN), ahatzi (LN, Z), ahatze (LN), āhātze (Z), aaztu (B, G, HN), antzi (HN), antzitu (B), anztu (old B), ātze (R), átze (R), aztu (B, G, HN Sout)

'to forget'

PRE-BASQUE: *anatzi / *anantzi / *ena(n)tzi 'to forget' (*recte* *enantzi)

PROTO-BASQUE: *en-vantsu-

PIE: *men- 'to think, remember' + -to- participial suffix + *n̥- negative prefix

PROTO-CELTIC: *man-yo- 'to think, remember'

CELTIC: Old Irish muinithir 'think'

OTHER IE LANGUAGES: Latin meminī 'to remember', Latin immemor 'forgetful' (<*n̥-me-mn-os-), Lithuanian miniù 'to remember', Greek mimnḗskō 'to remember', Old English munan 'to remember'

COMMENT: *m̥to- > *vento- > *ventsu- > *vantsu- > *antsu > *antzi, plus *en- prefix (< *n̥-) > *enantzi. Negative *en- prefix must have been added in Proto- or Pre-Basque stage; otherwise PIE *n̥m- would have yielded **emm- as in eman 'to give' (which see).

SOURCES: T-E 71, 396, 398; M-A 322-323; M 256; V 371; B 953; KR 375; IEW 726f; LIV 435f; JIES #202; DICT 17

97. urte

'year'

PRE-BASQUE: *urte < *ur- + *-te 'duration suffix'

PROTO-BASQUE: *vura-

PIE: *morh₂- 'lapse of time'

PROTO-CELTIC: *mar-o- 'remain'

CELTIC: Old Irish maraid 'lasts, remains, persists'

OTHER IE LANGUAGES: Latin mora 'delay, lapse of time'

COMMENT: *morh₂- > *mora- > *vura- > *ura- + *-te 'duration suffix' > urte (by syncope: see P38 in T-E 32).

SOURCES: T 280; T-E 19, 345, 360, 390, 394; M 257; V 388; IEW 969f; LIV 569f; JIES #237; DICT 128

98. argal

'thin'

PRE-BASQUE: *N/A*

PROTO-BASQUE: ***vakrelu**

PIE: ***meh₂k-** 'thin, elongated' > ***mh₂k-ró-** 'thin, long'

OTHER IE LANGUAGES: Latin **macellus** 'quite thin', Latin **macer** 'lean, meagre, thin', Old Norse **magr** 'thin, lean', Hittite **maklant-** 'thin, slim'

COMMENT: Diminutive *-lo- extension (as in Latin **macellus**): ***mh₂krelo-** > ***vakrelu** > ***akrelu** > (metathesis) ***arkelu** > ***arkel** > ***arkal** > (voicing) **argal**.

SOURCES: T 177; M-A 299; M 254; V 356-357; K 544; KR 347; IEW 699; JIES #97; DICT 28

99. eke (B HN A LN S R), ike (L), ke (B Sout G HN S R), khe (L LN Z), kee (B), kei (R), ki (G HN), ge (old G, H.)

'smoke (n.)'

PRE-BASQUE: ***eke(e)** 'smoke'

PROTO-BASQUE: ***veuk-** 'smoke'

PIE: ***(s)meuĝ(h)-** 'smoke'

PROTO-CELTIC: ***muk-V-** 'smoke'

CELTIC: Middle Irish **múch** 'smoke', Cornish **mok** 'smoke'

OTHER IE LANGUAGES: Armenian **mux** 'smoke'; English **smoke**

COMMENT: ***meuĝh-** > ***veuĝh-** > ***veuk-** > ***euk-** > ***ek-**.

SOURCES: T 313; T-E 33, 42, 248, 389, 392; M-A 125; M 281; MART 484; KR 458; IEW 971; JIES #100; DICT 55

100. herio

'death'

PRE-BASQUE: *N/A* (*recte* ***[h]erio**)

PROTO-BASQUE: ***ver-io**

PIE: ***mer-** 'to die'

PROTO-CELTIC: ***mar-wo-** 'dead'

CELTIC: Middle Welsh **marw**, Middle Breton **maru** 'dead'

OTHER IE LANGUAGES: Latin **morior** 'to die', Avestan **miryeiti** 'dies', Sanskrit **mriyáte** 'dies'

COMMENT: with *-ie/o- extension as in Latin and Indo-Iranian.

SOURCES: T 310; M-A 198; M 259; V 389-390; IEW 735; LIV 439f; JIES #105; DICT 59

101. **ero** (old B), **erho** (Z), **eho** (Z)

'to kill'

PRE-BASQUE: ***ero / *-ro(-)** 'to kill'

PROTO-BASQUE: ***-ver-o-**

PIE: ***mer-** 'to die'

PROTO-CELTIC: ***marwo-** 'dead'

CELTIC: Old Irish **marbaid** 'kills'

OTHER IE LANGUAGES: Latin **morior** 'to die', Sanskrit **māráyati** 'to kill', Old Norse **myrða** 'to kill', English **murder**

SOURCES: T 214; T-E 46, 176, 387, 392, 394; M-A 198; M 259; V 389-390; KR 378; IEW 735; LIV 439f; JIES #103; DICT 60

102. **hil** (L LN Z), **il** (B G HN LN R)

'dead; death'

PRE-BASQUE: ***[h]il** 'dead'

PROTO-BASQUE: ***vel**

PIE: ***mer-** 'to die'

PROTO-CELTIC: ***mar-wo-** 'dead'

CELTIC: Middle Welsh **marw**, Middle Breton **maru** 'dead'

OTHER IE LANGUAGES: Latin **morior** 'to die', Avestan **miryeiti** 'dies', Sanskrit **mriyáte** 'dies'

COMMENT: a root noun: ***mer** > ***ver** > ***er** > ***el** > **il**; for ***-r** > **-l** compare **gibel** 'liver'.

SOURCES: T 99, 178; T-E 221, 386, 393; M-A 198; M 259; V 389-390; IEW 735; LIV 439f; JIES #106; DICT 84

103. **labur**

'short'

PRE-BASQUE: ***labur** 'short'

PROTO-BASQUE: ***vrabulu**

PIE: ***mr̥ǵʰu-** 'short'

OTHER IE LANGUAGES: Latin **brevis** 'short', Greek **brakhús** 'short', Avestan **mərəzu-** 'short', Old High German **murg** 'short'

COMMENT: with ***-olo-** diminutive extension: ***mr̥ǵʰu-olo-** > ***vr̥ǵʰuolo-** > ***vraǵʰwulu** > ***vragʷulu** > ***vrabulu** > ***rabulu** > (with regular rhotacism of intervocalic ***l**) ***raburu** > ***rabur** > **labur** by rhotic dissimilation (P24 in T-E 29). See **mihi** 'tongue' for a very similar evolution of ***-RǵʰuV-** > ***-RgʷV-** > **-RbV-**.

SOURCES: T 145, 173, 175; T-E 258, 388, 393; M-A 319; V 75; B 236; KR 377; IEW 750f; JIES #108; DICT 99

104. ni

'I'

PRE-BASQUE: ***ni** 'I, me'

PROTO-BASQUE: ***vne** 'me'

PIE: ***h₁mn-e** 'me' (acc.-obl.)

PROTO-CELTIC: ***mī**, ***me** 'I'

CELTIC: Middle Welsh **mi** 'I', Cornish **my** 'I'

OTHER IE LANGUAGES: Hieroglyphic Luwian /**?min**/ 'me', Tocharian B **ñas** 'I, me', OCS **mene** 'me' (acc., gen.).

COMMENT: ***h₁mne** > ***vne** > **ni** (for e/i vocalism, compare Celtic, as well as **hi** 'thou'). K 111-113 reconstructs PIE ***h₁mne** as accusative and oblique first person singular pronoun, which was extended to nominative usage in Lydian, Lycian and Luwian **amu** 'I'; AD 265 also reconstructs ***mne** for Tocharian B **ñas** 'I, me'.

SOURCES: T 96-97, 196-197, 218; T-E 20, 297, 387, 393; M 270; K 111-113, 912; KR 116; AD 265; IEW 702; JIES #69; DICT 108

Evidence for the loss of ***t-** is fairly limited, but very interesting:

105. **etxe** (c.), **etse** (B, Sout R), **etze** (B), **itxe** (G, HN)

'house'

PRE-BASQUE: ***etse** / ***etze** 'house' (*recte* ***etzi**)

PROTO-BASQUE: ***θektsu**

PIE: ***(s)teg-** 'to cover' > PIE ***tek-to-** 'covered' > 'roof' > 'house'

PROTO-CELTIC: ***tegos-** 'house'

CELTIC: Old Irish **tech** 'house', Old Welsh **tig** 'house', Modern Breton **ti** 'house', Middle Cornish **chy** 'house'

OTHER IE LANGUAGES: Latin **tectum** 'roof, ceiling, dwelling', Greek **(s)tégos** 'roof, house', Old High German **dach** 'roof'

COMMENT: ***tekto-** > ***tektsu-** > ***θektsu-** > ***ektsu-** > ***ektzi** > ***eitzi** > ***etzi**.

SOURCES: T 344; T-E 19, 36, 184, 387, 392; M-A 222, 226; M 376; V 608; B 1393; KR 531; IEW 1013f; LIV 589; JIES #213; DICT 66

106. **hi**

'thou'

PRE-BASQUE: ***[h]i** 'thou'

PROTO-BASQUE: ***θi**

PIE: ***ti(h_x)** / ***tih₁** / ***tu(h_x)** 'thou' / ***te** 'thee' (clitic)

PROTO-CELTIC: ***tū**, ***tu** 'thou'

CELTIC: Old Welsh **ti**, Middle Breton **ti**, Cornish **ty** 'thou'

OTHER IE LANGUAGES: Latin **tū** 'thee', Palaic **tī** 'thou', Cuneiform Luwian **tī** 'thou', Hieroglyphic Luwian **tī** 'thou', English **thee**

COMMENT: Basque **hi** may either derive from marginally attested PIE nominative ***ti(h_x)** or, more likely, from accusative ***te** (with subsequent i-vocalism as in Celtic), as in **nī** 'I' < ***mne**.

SOURCES: T 96-97, 196, 218; T-E 20, 215, 390, 393; M-A 416; M 392; V 631-632; K 111-115, 1035-1036; KR 549; IEW 1097f; JIES #117; DICT 80

107. hirur (L LN old Z), **irur** (S A), **írur** (R), **hiru** (LN EB), **hí(r)u** (Z), **iru** (B G HN), **íror** (R), **idu** (B)

'three'

PRE-BASQUE: *[h]irur '3'

PROTO-BASQUE: ***θire** (masc.), ***θisure** (fem.)

PIE: ***trei-es** (masc.), ***tisor-es** (fem.) '3'

PROTO-CELTIC: ***trīs** '3'

CELTIC: Old Irish **téoir** / **teōir** (fem.), Gaulish **tiðres** (fem.)

OTHER IE LANGUAGES: Armenian **ere-**, **eri-** 'three', Avestan **tišrō** 'three' (fem.), Sanskrit **tisrás** 'three' (fem.), English **three**, etc.

COMMENT: masc. *treies > *tireies > *θireies > *θireie > *θiree > *θire > *ire; fem. *tisoires > *tisures > *θisures > *θisure > *isur; then masc. *ire and fem. *isur likely underwent a two-way analogical remodelling: 1) fem. *isur > *irur, with *-r- by analogy with masc. *ire; 2) masc. *ire > *iru with *-u by analogy with fem. *irur.

SOURCES: T 144, 174, 272-273; T-E 231, 389, 393; M-A 311; M 390; V 629; MART 261; KR 546; IEW 1090f; JIES #118; DICT 90

Evidence for the loss of **dh-* is fairly abundant, though most examples are not straightforward:

108. egur

'firewood'

PRE-BASQUE: **egur* 'firewood'

PROTO-BASQUE: **ðegru-*

PIE: **dʰegwh-* 'to burn' > **dʰegwh-ro-* 'burning'

PROTO-CELTIC: **degwi-* 'flame, blaze'

CELTIC: Old Irish **daig** 'flame'

OTHER IE LANGUAGES: Latin **febris** 'fever', Greek **téphra** 'ash'

COMMENT: **dʰegwhro-* > **dʰegwhru-* > **ðegru-* > **egru-* > *egur*. Cannot derive from PIE **péh₂ur* 'fire' (see DICT for a discussion).

SOURCES: T 311; T-E 31, 166, 386, 392; M-A 124; M 93; V 208; B 1475; NIL 540; IEW 240f; LIV 133f; JIES #210; DICT 54

109. orri (B G HN Sout L), horri (L)

'leaf'

PRE-BASQUE: **[h]orri* 'leaf'

PROTO-BASQUE: **ðolyV*

PIE: **dʰelh₁-* > **dʰolh_x-yo-* 'sprout, blossom, leaf'

PROTO-CELTIC: **dol-V-* 'leaf'

CELTIC: Middle Irish **duille** 'leaf, foliage', Old Breton **dol** 'leaves', Middle Welsh **deil** 'leaves, foliage' (< **dolyā*)

OTHER IE LANGUAGES: Latin **folium** 'leaf', Greek **thálos** 'sprout'

COMMENT: **dʰolh_xyo-* > **ðolyV* > **olyV* > **orr-*.

SOURCES: T 127, 176, 307; T-E 316, 387, 394; M-A 161; M 102; V 230; IEW 234; LIV 132; JIES #95; DICT 114

110. esne (HN), esene (HN), ezne (old B Sout old LN R S), ezné (Z)

'milk (n.)'

PRE-BASQUE: **ezene* 'milk'

PROTO-BASQUE: **ðeθin-*

PIE: **dʰedʰh₁i-* 'sour milk' (< PIE **dʰeh₁i-* 'to suckle')

PROTO-CELTIC: **di-na-* 'to suck'

CELTIC: Cornish **dena** 'to suck'

OTHER IE LANGUAGES: Old Prussian **dadan** 'milk', Sanskrit **dádhi** 'sour milk', Gothic **daddjan** 'to suckle'

COMMENT: same **-n-* extension as in Old Prussian: **dʰedʰh₁in-* > **ðeθin-* > **ezin-* > (with syncope) **ezn-* (> **esn-*).

SOURCES: T 163, 316; T-E 18, 182, 387, 392; M-A 262; M 99; KR 87; MART 229-231; IEW 241f; LIV 138f; JIES #114; DICT 65

111. ugatz

'female breast'

PRE-BASQUE: ***ugatz** 'breast (female)'

PROTO-BASQUE: ***ōugatsu**

PIE: ***d^h(e)ugh₂-** (seen e.g. in PIE ***d^hugh₂-ter-** 'daughter')

PROTO-CELTIC: ***duxtīr** 'daughter'

CELTIC: Gaulish **duxtir** 'daughter'

OTHER IE LANGUAGES: Sanskrit **duhitār-** 'daughter', Greek **thugátēr** 'daughter', English **daughter**

COMMENT: *d^hugh₂-to- > *d^hugatu- > *d^hugatsu- > *ōugatsu > *ugatzu > ugatz. See DICT for a detailed discussion.

SOURCES: T 175, 271, 283; T-E 354, 385, 394; M-A 213, 370, 472; M 109; KR 93, 106, 107; K 902; B 561, 917-918, 1475; DERK 127, IEW 271; LIV 148f; JIES #116; DICT 124

112. behe, bee (B), be (B G)

'below, bottom'

PRE-BASQUE: ***be[h]e** (*recte* ***bene**) '(space) below; under'

PROTO-BASQUE: ***ōeubn-** 'bottom'

? PIE: ***d^heubh-** 'deep'

PROTO-CELTIC: ***dubno-** 'deep'

CELTIC: Middle Welsh **dwfn**, Cornish **down** 'deep'

OTHER IE LANGUAGES: Church Slavic **дъно** 'bottom', English **deep**

COMMENT: *d^heubh-n- > *ōeubn- > *eubn- > *euben- > *eben- > *ben-. See DICT for further details.

SOURCES: T 295; T-E 131, 385, 391; M-A 292; M 107; DERK 130; KR 94; IEW 267f; JIES #113; DICT 38

113. min

'pain'

PRE-BASQUE: ***bin** 'pain'

PROTO-BASQUE: ***ōebVn-**

PIE: ***d^hebh-** 'to harm, hit' + nasal extension

OTHER IE LANGUAGES: Sanskrit **dabhnóti** 'hurts, injures', Hittite **tepnu-** 'to despise'

COMMENT: *d^hebhVn- > *ōebVn- > *eben- > *ben- > *bin.

SOURCES: T 132, 134, 142; T-E 289, 388, 392; M-A 279; K 869; IEW 240; LIV 132f; JIES #115; DICT 105

Evidence for the loss of ***d-** is limited:

114. egun

'day; today'

PRE-BASQUE: ***egu(-n)** 'day; sun'

PROTO-BASQUE: ***ǵewu-**

PIE: ***di-eu-** > ***dei-w-o-** 'day, clear sky, heaven, sky-god'

PROTO-CELTIC: ***dīy(w)o-** 'day', ***dēwo-** 'god' (< PIE ***deiwo-**)

CELTIC: Old Irish **dīe** 'day', Old Welsh **did** 'day', Cornish **dew** 'god'

OTHER IE LANGUAGES: Latin **dies** 'day', Latin **diu** 'by day', Latin **deus** 'god' (< PIE ***deiwo-**), Armenian **tiw** 'day', Sanskrit **diáuḥ** 'heaven, sky god, day', Greek **Zeus** 'Zeus'

COMMENT: ***deiwo-** > ***deiwu-** > ***ǵeiwu-** > ***ǵewu-** > ***ewu-** > ***egu-**. The original Pre-Basque word was ***egu** 'day', whence **egu-n** 'today' with -n locative ending, later generalized to nominal status. **Eki** 'sun' (< ***egu-ki**) and **egu-zki** 'sun' also derive from ***egu**.

SOURCES: T 175, 211, 310; T-E 19, 41, 165, 386, 392; M-A 301; M 96, 101; V 167, 170, 172-173, 315; MART 616; B 498; IEW 184f.; JIES #110; DICT 53

115. mihi (L LN), mĩhĩ (Z), mĩ (R), mĩi (old B), mĩ (old B), mii (G), mi (HN R), min (B G)

'tongue'

PRE-BASQUE: ***bini** 'tongue' (*recte* ***mini**)

PROTO-BASQUE: ***ǵenbin-**

PIE: ***d̥ǵ̑h̑u(e)h₂-** 'tongue'

PROTO-CELTIC: ***tangwā-t-** 'tongue'

CELTIC: Old Irish **tengae**, Old Welsh **tauawt**, Middle Breton **teut** 'tongue'

OTHER IE LANGUAGES: English **tongue** (< Proto-Germanic ***tungōn-**); Tocharian B **kantwo** (< Proto-Tocharian ***käntwo** < ***tänkwo** < PIE ***d̥ǵ̑h̑ueh₂-n-**).

COMMENT: though counter-intuitive at first sight, this etymology is phonetically regular, if we start with a nasal extension (as can be found in Germanic and Tocharian): ***d̥ǵ̑h̑uh₂-Vn-** > ***ǵenǵhwVn-** >¹⁷ ***ǵengwVn-** > ***ǵenbin-i** > ***enbini** > ***emmini** > ***mini**.

SOURCES: T 127, 132, 134, 141, 287; T-E 19, 56, 288, 389, 392; M-A 175; M 368; AD 139; KR 526; IEW 223; JIES #112; DICT 105

¹⁷ see **labur** 'short' for a very similar evolution of **-Rǵ̑h̑uV-** > **-RǵwV-** > **-RbV-**.

Evidence for the loss of ***k-** is limited, while evidence for the loss of ***ġ-** is more copious:

116. euli (B Sout G), **eulli** (S old B), **elbi** (G), **éllu** (R), **auli** (A), **uli** (HN L LN), **üli** (LN Z), **üllü** (Z), **ülü** (Z), **üllü** (Z)

'fly (n.)'

PRE-BASQUE: ***eulli** 'fly (n.)'

PROTO-BASQUE: ***xeul-l-**

PIE: ***kul-** / ***ġuh_x-lo-** 'sharp' > 'mosquito, fly'

PROTO-CELTIC: ***kuli-** 'mosquito, fly'

CELTIC: Old Irish **cuil** 'fly, mosquito', Cornish **kelionen** 'fly' (singulative)

OTHER IE LANGUAGES: Latin **culex** 'mosquito, gnat, midge'

COMMENT: ***-IV-** diminutive extension: ***kuh_xl-l-** > ***xüll-** > ***xeull-** > ***eull-**, plus **-i** ending found in several animal names¹⁸.

SOURCES: T 299; T-E 19, 386, 392; M 229; V 150; IEW 626; JIES #122; DICT 67

117. or (old B L LN Z), **hor** (LN), **ho(r)** (Z)

'dog'

PRE-BASQUE: ***or** 'dog' (*recte* ***oli**?)

PROTO-BASQUE: ***xoli-**

PIE: ***(s)koli-** 'young dog'

OTHER IE LANGUAGES: Albanian **këlysh** 'young dog', Greek **skúlaks** 'young dog'

COMMENT: ***koli-** > ***xoli-** > ***oli** > ***ori** (with regular rhotacism of intervocalic ***l**) > **or** (with sporadic loss of final vowel in disyllabic words - compare e.g. **otz** 'cold', **zur** 'wood').

SOURCES: T 178, 298; T-E 312, 386, 394; M-A 142; B 1361; JIES #236; DICT 112

¹⁸ e.g. **ahari** 'ram', **ardi** 'sheep', **behi** 'cow', **txori** 'bird', **zorri** 'louse'

118. **adar**

'horn'

PRE-BASQUE: ***adar** 'horn' (*recte* ***adarr**)

PROTO-BASQUE: ***xararr**

PIE: ***kerh₂sr** 'horn'

OTHER IE LANGUAGES: Tocharian B **krorīya** 'horn', Latin **crābrō** 'hornet', Greek **kéras** 'horn', English **horn**

COMMENT: ***kerh₂sr** > ***kerasr** > ***xerasr** > ***xerarr** > ***ararr** > ***adarr** by rhotic dissimilation: see T 145 and rule P24 in T-E 29: "*In the sequence /rVrr/, the first (tapped) rhotic is unstable, and commonly dissimilates to /l/, /d/ or zero*". **Adar** can be derived from PIE with regular sound changes; a link with Old Irish **adarc** is discussed in T-E 76 and T 262 but is ultimately rejected.

SOURCES: T 145, 176, 262, 305, 369; T-E 29, 76, 387, 391; M-A 137; V 140; B 676; KR 259; AD 218; IEW 576; JIES #119; DICT 18

119. **(h)ar-** (singular stem), **(h)ai(e)-** (plural stem), **(h)ori(-)**

'that'

PRE-BASQUE: ***[h]ar(-)**, ***[h]or(r)-** 'that'

PROTO-BASQUE: ***xV-θor**

PIE: ***kV-** 'this' (see **hau**) + PIE ***tor** 'there'

OTHER IE LANGUAGES: Gothic **þar** 'there', English **there**, Sanskrit **tár-hi** 'then'

COMMENT: the two Basque demonstratives **(h)ar-** / **(h)ai(e)-** (distal) and **(h)ori(-)** (proximal) probably have this common origin.

SOURCES: T 98, 181, 198; T-E 98, 314, 389, 391, 394; M-A 418; M 203; V 102; K 425; KR 225, 534; MART 561; IEW 609f; JIES #125; DICT 26

120. **hau** (L LN Z), **haur** (LN Z), **au** (B G HN), **gau** (A HN), **kaur** (R), **kau** (S R); oblique singular stem **(h)on-**; plural stem **(h)au(e)-** (except B)

'this'

PRE-BASQUE: ***ka-**, **ke-** / ***[h]au(-r)** / ***[h]on-** (*recte* ***ha-** / ***ho-**) 'this, here'

PROTO-BASQUE: ***xV-**

PIE: ***kV-** 'this': PIE ***ko-** / ***kei** / ***ke** / ***ki-**

PROTO-CELTIC: ***ki** / ***koy** / ***kē** 'demonstrative particle or pronoun'

CELTIC: Old Irish **ce** 'demonstrative particle'

OTHER IE LANGUAGES: Hittite **kā-**, **kū-**, **ki-** 'this', Gothic **hi-** 'this', English **here**, Latin **-ce** 'here', Armenian **sa** 'this'

SOURCES: T 98, 181, 198; T-E 116, 389, 391; M 203; V 102; K 425; KR 225; MART 561; IEW 609f.; JIES #124; DICT 33

121. odol

'blood'

PRE-BASQUE: ***odol** (*recte* ***orol**) 'blood'

PROTO-BASQUE: ***xorulu**

PIE: ***kr(e)uh₂-** 'gore, raw meat, blood'

PROTO-CELTIC: ***krū-** 'blood'

CELTIC: Old Irish **crú** 'blood, gore', Middle Welsh **creu** 'blood'

OTHER IE LANGUAGES: Sanskrit **krūrā-**, Avestan **xrūra-** 'bloody', Latin **cruor** 'blood (from a wound)', Old Church Slavic **kry** 'blood', English **raw**

COMMENT: *-lo- extension: ***kruh₂lo-** > ***krulu-** > ***korulu-** > ***xorulu** > ***orul**. For -r- > -d- see P17 in T-E 28 (/r/ is [r]); one must further assume a vowel assimilation from ***orul** to ***orol**.

SOURCES: T 175, 283; T-E 19, 304, 385, 394; M 227; V 146; DERK 254; KR 242, 244; IEW 621f; JIES #126; DICT 110

Evidence for the loss of both **g^h-* and **ǵ^h-* is limited:

122. **buru**

'head'

PRE-BASQUE: **buru* 'head' (*recte* **bulu*)

PROTO-BASQUE: **yebulu*

PIE: **g^heb^hōl* / **g^heb^h-(e)l-* / **g^heb^h-l-o-* 'head'

OTHER IE LANGUAGES: Greek **kephálē** 'head', Tocharian A **śpāl** 'head', Gothic **gibla** 'pinnacle'

COMMENT: **g^heb^hol* > **g^heb^hul-* > **yebul-u-* > **ebulu* > **bulu*, followed by regular rhotacism of intervocalic **-l-* after Pre-Basque. Also see **berarri** 'ear'.

SOURCES: T 129, 173, 285; T-E 19, 148, 387, 392; M-A 174; AD 642; KR 173; B 682; JIES #120; DICT 46

123. **belarri** (B G HN L), **beharri** (L LN Z), **bearri** (HN LN S R), **begarri** (HN S), **biarri** (HN), **biárri** (R)

'ear'

PRE-BASQUE: **berarri* 'ear'

? PROTO-BASQUE: **yebel-* 'head' + **ǵalyV-* 'leaf'

? PIE: **g^heb^h-el-* 'head' + PIE **d^helh₁-yo-* 'leaf'

COMMENT: A compound of **buru** 'head' (<PIE **g^heb^hōl*, nominative) and **orri** 'leaf' (PIE **d^holh_xyo-*, strong grade) is semantically plausible, but vowels don't match (***burorri* would be expected). However, an older compound from reflexes of oblique PIE stem **g^heb^h-el-* 'head' (>**yebel-* > **ebel-* > **bel-* > **ber-*) and normal-grade **d^helh₁-yo-* (> **ǵelyV-* > **ǵalyV-* > **alyV-* > **arr-*) would account for vowels, too.

SOURCES: T 145, 284, 396; T-E 20, 29, 134, 386, 392; M-A 161, 174; M 102; V 230; AD 642; KR 173; B 682; IEW 234; LIV 132; JIES #130; DICT 39

124. eri

'sick, ill'

PRE-BASQUE: ***eli** / ***eri** 'sick, ill' (*recte* ***el-i**)

PROTO-BASQUE: ***yel-**

PIE: ***ǵ^helh_x-(ro-)** 'evil, unhealthy'

PROTO-CELTIC: ***galaro-** 'sickness, distress, pain'

CELTIC: Old Irish **galar** 'disease'

OTHER IE LANGUAGES: Lithuanian **žalà** 'damage, harm', Old Norse **galli** 'flaw'

COMMENT: ***ǵ^helh_x-** > ***yel-** > ***el-** + adjectival suffix **-i**.

SOURCES: T 189; T-E 174, 388, 392; M-A 339; M 149; K 429; KR 165; IEW 411; JIES #121; DICT 59

125. izen (c), uzen (B)

'name'

PRE-BASQUE: ***izen** 'name' (*recte* ***e-uzi-en**)

PROTO-BASQUE: ***yutsu**

PIE: ***ǵ^heu(h_x)-** 'to call, invoke' > ***ǵ^hu-to-**

PROTO-CELTIC: ***gutu-** 'voice'

CELTIC: Old Irish **guth** 'voice'

OTHER IE LANGUAGES: Old Church Slavic **zovŭ** 'I call', Avestan **zavaiti** 'calls'

COMMENT: ***ǵ^huto-** > ***ǵ^hutsu** > ***yutsu** > ***utsu** > ***uzi**; izen / uzen is a perfective participle derived from ***uzi** with ***e-...-en** circumfix (see below): ***e-uzi-en** > uzen / izen.

SOURCES: T 176; T-E 19, 236, 388, 393; M-A 354; M 169-170; DERK 551; IEW 413; JIES #159; DICT 94

126. hori, ori

'yellow'

PRE-BASQUE: ***[h]or-i** 'yellow' (*recte* ***ol-i**)

PROTO-BASQUE: ***yol-**

PIE: ***ǵ^helh₃-** 'yellow'

PROTO-CELTIC: ***gelo-** 'yellow, white'

CELTIC: Middle Welsh **gell** 'yellow'

OTHER IE LANGUAGES: Latin **helvus** 'yellow', English **yellow**

COMMENT: from strong grade: ***ǵ^holh₃-** > ***yol-** > ***ol-** + **-i** adjective-forming suffix, with subsequent regular rhotacism of intervocalic ***l** from Pre-Basque to Basque, i.e. ***oli** > **ori**. Alternative etymologies might involve the strong grade of PIE ***h₁elu-** 'reddish, yellow' (but the loss of ***u** would be hard to explain) or PIE ***d^helh_x-** / ***d^holh_x-** 'yellow', seen in Latin **fulvus** 'brown, sandy, gold-colored' and Armenian **deřin** 'yellow'.

SOURCES: T 143; T-E 19, 215, 314, 390, 394; M-A 331-333; M 156; V 282, 248; KR 174; IEW 429f; JIES #218; DICT 112

Personal pronouns

For **ni** 'I' (< *mne, acc.) and **hi** 'thou' (< *te), see above.

127. gu

'we'

PRE-BASQUE: ***gu** 'we, us'

PROTO-BASQUE: ***wu**

PIE: ***wei** 'we'

OTHER IE LANGUAGES: Hittite **wēs** 'we', Tocharian B **wes** 'we', Gothic **weis** 'we', English **we**

COMMENT: *w- > g- is regular. As for final -u, several explanations are possible:

1. *wei > *wo (by vowel rounding, conditioned by preceding *w-) > *wu > gu;
2. or else, *wo arose by analogy with other PIE *-o- endings in plural personal pronouns, such as PIE ***no-** 'we (obl.)', PIE ***wo-** 'you (obl.)' ¹⁹;
3. alternatively, final -u in **gu** may have arisen by analogy with **zu** 'you (plural)'.

SOURCES: T 96-97, 196, 218; T-E 20, 211, 389, 393; M-A 60, 83, 97, 108, 416; K 111-116, 1004; AD 266; KR 590; JIES #45; DICT 79

128. zu

'thou, you'

PRE-BASQUE: ***zu** 'you (plural)'

PROTO-BASQUE: ***su**

PIE: ***swe** 'you (plural)'

PROTO-CELTIC: ***swīs** 'you (plural)'

CELTIC: Old Irish **sí**, Gaulish **sui**, **sue** 'you (plural)', Middle Welsh **chwi**

OTHER IE LANGUAGES: Hittite **sum-** 'you (pl.)'

COMMENT: currently, Basque uses **zu** (along with intimate **hi**) for 2nd person singular and **zuek** for 2nd person plural, but there is ample evidence that this usage is recent, and that **zu** was previously used for 2nd person plural²⁰. A derivation of Basque **zu** from PIE ***tuh_x** 'thou' would be regular from a phonetic viewpoint (*tuh_x > *tu > *tsu > zu); semantically, though, it would not account for the fact that *zu was probably plural in Pre-Basque. A better etymology involves clitic PIE ***swe** 'you (plural)', via an intermediate ***su(e)**²¹ (compare Celtic reflexes - especially Gaulish). A further possibility is that **zu** might be a conflation of singular ***tu**-²² and plural ***su-**, which would have become phonetically identical (**zu**), generating the innovation **zu-ek** for the plural.

SOURCES: T 96-97, 196-197, 218; T-E 20, 215, 379, 390, 394; M-A 416-417; M 365; K 115-116, 779; JIES #84; DICT 137

¹⁹ a similar *e > *o analogy-driven change can be found e.g. in Tocharian B **we-** 'we' < ***wo-** (by analogy) < ***wei-** (AD 266)

²⁰ e.g., in modern Basque, **zu** takes plural absolutive agreement in finite verbs though it is used as a 2nd person singular pronoun

²¹ otherwise *sw- should > **b-

²² As for the plausibility of a co-existence of **hi** < ***te-** and **zu** < ***tu-**, compare e.g. the fact that in several parts of Northern Italy two 2nd person singular *subject* pronouns synchronically coexist side by side: a colloquial, intimate **te** (< Latin accusative **tē**), and an unmarked **tu** (< Latin nominative **tū**)

Interrogative stems

129. **no-**

'interrogative stem'

PRE-BASQUE: ***no-** 'interrogative stem'

PROTO-BASQUE: ***eno-**

PIE: ***h₁eno-** 'that'

OTHER IE LANGUAGES: Tocharian B **intsu** 'which, what kind of (interr.)', Tocharian B **ente** 'when (interr.)', Greek **éntha** 'there, here; where (rel.)', Greek **ekeĩnos** 'that' (< *e-ke-eno-s), Latin **enim** 'for (conj.)', Umbrian **eno** 'then'

COMMENT: *h₁eno- > *eno- > no-, with regular loss of unstressed *e- and a shift from demonstrative to interrogative meaning seen also in Tocharian. Also compare **ze(r)-** 'interrogative stem' for a similar semantic shift. See DICT for a detailed discussion.

SOURCES: T 98, 197; T-E 20, 297, 300, 334, 389, 393; M-A 419; V 40-41, 190, 399; AD 64-65, 85; DERK 372; B 96-97, 397, 424, 425; MART 561-562; K 220; JIES #70; DICT 108

130. **ze(r)-**

'interrogative stem'

PRE-BASQUE: ***ze-** 'interrogative stem'

PROTO-BASQUE: ***sV-**

PIE: ***s-o/e-** 'demonstrative'

PROTO-CELTIC: ***so-** 'this'

CELTIC: Old Irish **-so** 'clitic demonstrative particle', Old Irish **sin** 'this'

OTHER IE LANGUAGES: Sanskrit **sá-** 'that', Greek **ho** 'the', Gothic **sa** 'that', Tocharian B **se** 'this'

COMMENT: same semantic shift 'demonstrative' > 'interrogative' as in **no-** 'interrogative stem' (which see). A similar shift, from 'demonstrative' to 'relative', of PIE *to- can be seen e.g. in Germanic (e.g. English **that**, German **der**).

SOURCES: T 98, 197; T-E 370, 389, 394; M-A 417-418; M 335, 336, 350, 351; V 561, 568; B 1041; KR 530; AD 698; IEW 978f.; JIES #167; DICT 135

Numerals

For **bi** 'two' (< *dwi-), **hirur** 'three' (< *trei-es / *tisor-es), **sei** 'six' (< *seks), see above.

131. lau, laur

'four'

PRE-BASQUE: ***laur** 'four' (*recte* ***lau**)

PROTO-BASQUE: ***flava** 'palm of the hand'

? PIE: ***plh₂meh₂** 'palm, hand'

PROTO-CELTIC: ***flāmā** 'palm, hand'

CELTIC: Old Welsh **lau** 'palm, hand', Old Irish **lám** 'hand'

OTHER IE LANGUAGES: Latin **palma** 'palm', Old High German **folma** 'palm'

COMMENT: *plh₂meh₂ > *plama > *flava > lau. Optional final -r by analogy with **hirur** 'three'.

SOURCES: T 144, 174, 272-273; T-E 20, 263, 386, 393; M-A 182, 311; M 132; V 441; KR 159; K 571; IEW 73; JIES #91; DICT 101

132. bortz, bost

'five'

PRE-BASQUE: ***bortz** '5'

PROTO-BASQUE: ***bost** ?

? PIE: ***pn̥(kʷ)-s-ti-** 'fist' / PIE ***gʷos-to-** 'branch'

PROTO-CELTIC: ***bostā** 'palm, fist'

CELTIC: Old Irish **bos** 'palm, fist'

OTHER IE LANGUAGES: Old High German **fūst** 'fist', English **fist**, Old Church Slavic **pęstь** 'fist', Lithuanian **kūmstė** 'fist' (< *punkstė)

COMMENT: **bost** might derive from PIE ***pn̥(kʷ)-s-ti-** 'fist', either directly (via ***kʷn̥Csti-**), or via Germanic (***fust**); or else, **bost** might be a Celtic loan < Proto-Celtic ***bostā** 'palm, fist' < PIE ***gʷos-to-** 'branch'. If any of the above is correct, then **bost**²³ is the older form, while **bortz** must be explained as a later, analogical back-formation. See DICT for a detailed discussion.

SOURCES: T 173, 272, 370, 376; T-E 147, 386, 392; M-A 312; M 71, 176; KR 160; DERK 399; JIES #149; DICT 45

²³ possibly from an older ***bozt**: see T 138, reporting several instances of -zt- > -st-.

133. **zazpi**

'seven'

PRE-BASQUE: ***zazpi** '7'

PROTO-BASQUE: ***septsuv**

PIE: ***septm̥** '7'

PROTO-CELTIC: ***sextam** '7'

CELTIC: Old Irish **secht**, Middle Welsh **seith**

OTHER IE LANGUAGES: Latin **septem**, Gothic **sibun**, English **seven**, etc.

COMMENT: *septm̥ > *septum²⁴ > *septsuv > *septsu > (vowel lowering) *sapsu > *zapzi > (metathesis) zazpi.

SOURCES: T 173, 272-273; T-E 19, 369, 388, 394; M-A 314; M 332; KR 429; IEW 909; JIES #81; DICT 134

zortzi 'eight' is obscure, except that -tzi might reflect PIE *h₃ektoh₁ 'eight': see next entry.

134. **bederatzi** (B G HN L LN), **bedratzi** (HN LN A S), **bederatzu** (R), **bedrátzu** (R), **bede(r)átzü** (Z)

'nine'

PRE-BASQUE: ***bed-era-tzu** '9'

? PROTO-BASQUE: ***oktsu** '8'

? PIE: ***h₃ektoh₁** '8'

PROTO-CELTIC: ***oxtū** '8'

CELTIC: Old Welsh **oith**

OTHER IE LANGUAGES: Armenian **ut'**, Lycian **ait-**, Gothic **ahtau** '8', English **eight**

COMMENT: PIE *h₃ektoh₁ 'eight' > *okto > *oktu > *oktsu > *oitzu; then *bede eta oitzu '1 and 8' > *bede ta 'tzu > *bededatzu > *bederatzu 'nine'. *Oitzu 'eight' > -tzi may also be present in **zortzi** 'eight' (but then zor- is obscure). See DICT for a detailed discussion.

SOURCES: T 272-273; T-E 58, 128-129, 388, 391; M-A 314; M 304; MART 631; KR 6; IEW 775; JIES #10

²⁴ with *u either because of labial *-m, or by analogy with Proto-Basque *oktsu 'eight' (see **bederatzi** 'nine')

Miscellanea

135. **aita** (c), **aite** (old B), **aitxa** (B)

'father'

PRE-BASQUE: ***atta** / ***aita** (*recte* ***atta**) 'father'

PROTO-BASQUE: ***atta**

PIE: ***atta-** / ***h₂et-o-** 'daddy'

PROTO-CELTIC: ***attyo-** 'father, foster father'

CELTIC: Old Irish **aite**

OTHER IE LANGUAGES: Greek **áttā**, Latin **atta**, Gothic **atta**, Hittite **atta-**, Albanian **at** 'father'

SOURCES: T 148, 269; T-E 81, 386, 391; M 46; V 60; K 225; KR 39; IEW 71; JIES #3; DICT 21

136. **begi**

'eye'

PRE-BASQUE: ***begi** 'eye'

? PROTO-BASQUE: ***ob-e-gi** 'the thing that sees', i.e. 'the organ of sight'

? PIE: ***h₃ekw-** 'to see; eye'

PROTO-CELTIC: ***en-ekwo** 'face' (< PIE ***h₁en-h₃ekwo-**)

CELTIC: Old Welsh **enep**, Old Breton **enep** 'face'

OTHER IE LANGUAGES: Latin **oculus** 'eye', Greek **op-** 'to see', Greek **óps** 'eye', Greek **ómma** 'eye' (< ***op-ma**), Gothic **augo** 'eye', English **eye**

COMMENT: **-ki** / **-gi** is a noun-forming suffix which forms concrete nouns: ***h₃ekw-** > ***okw-** > ***ob-** + ***-e-gi** > ***obegi** > **begi**, but loss of ***o-** is probably irregular.

SOURCES: T 172, 173, 175, 284; T-E 19, 131, 251, 386, 391; M-A 175, 327; M 115; V 425; B 1077, 1094, 1139; KR 41; IEW 775f; LIV 297; JIES #146; DICT 38

137. **edo** (c), **ero** (B)

'or'

PRE-BASQUE: ***edo** 'or'

PROTO-BASQUE: ***eu-do**

? PIE: ***h₂eu** 'away'

PROTO-CELTIC: ***aw-** 'from'

CELTIC: Old Irish **áu** 'away'

OTHER IE LANGUAGES: Latin **aut** 'either...or', Oscan **aut** 'but, or', Umbrian **ute** 'or', Greek **aû** 'again, on the other hand, on the contrary'

COMMENT: for ***h₂eu** > ***eu** compare **entzun** 'to hear'; the second element may be < PIE ***do** 'here'.

SOURCES: T-E 161, 388, 392; M 46, 102; V 64, 160; B 167; IEW 73; JIES #231; DICT 50

138. herri, erri

'country, land, people, population, nation, town, inhabited place'

PRE-BASQUE: *[h]erri- 'inhabited place, population'

PROTO-BASQUE: *eryo- ?

? PIE: *h₂er-yo- 'member of one's own group / community'

PROTO-CELTIC: *aryo- 'free man'

CELTIC: Old Irish **aire** 'free man'

OTHER IE LANGUAGES: Hittite **arā-** 'member of one's own group, peer, friend', Lycian **arus-** 'citizens', Sanskrit **aryá-** 'kind, hospitable', Sanskrit **árya-** 'Aryan'

COMMENT: a semantically plausible, but phonetically problematic etymology, as *h₂e- should regularly yield **a-. Another instance of *h₂e- > e- might be **erre** 'burn' if < PIE *h₂eh₁-t-r- 'fire'.

SOURCES: T 325; T-E 178, 387, 388, 392; M-A 266; M 43; K 198; IEW 55f; LIV 269; JIES #234; DICT 63

139. esku

'hand'

PRE-BASQUE: *esku 'hand'

PROTO-BASQUE: *yesku

? PIE: *ǵhes- 'hand'

OTHER IE LANGUAGES: Sanskrit **hásta-** 'hand' (< PIE *ǵhes-to-), Hittite **kessar** 'hand' (< PIE *ǵhes-r-), Greek **kheír** 'hand'

COMMENT: with a *-ko- or *-sko- (diminutive) extension: *ǵhes-(s)ko- > *yesku > esku.

SOURCES: T 169, 175, 285; T-E 19, 181, 387, 392; M-A 180; K 471; B 1620; JIES #151

140. itsaso

'sea'

PRE-BASQUE: *itsaso 'sea'

PROTO-BASQUE: *end(o)-salso

PIE: *h₁en-do 'inside' + PIE s(e)h₂l-d-to- 'salted'

PROTO-CELTIC: *sālo- 'salt'

CELTIC: Middle Irish **sál** 'sea, ocean, sea water'

OTHER IE LANGUAGES: Latin **salsus** 'salted'; Old High German **salz** 'salt', Latvian **sāls** 'salt'; English **salt**, Greek **hals** 'salt, sea'

COMMENT: *h₁endoseh₂ldto- 'with salt inside' > *endosalldto- > *endosalso > *endsalso > *etsalso > *itsazo > itsaso (by sibilant harmony, T 88-89). See DICT for more details.

SOURCES: T 88-89, 147, 174, 313; T-E 20, 232, 388, 393; M 319; V 189, 535; B 74-75; KR 425; IEW 878; JIES #54; DICT 91

141. lo

'sleep (n.)'

PRE-BASQUE: ***lo** 'sleep (n.)'

PROTO-BASQUE: ***leyo-**

PIE: ***leg^h-o-** 'to lie'

PROTO-CELTIC: ***leg-o-** 'to lay, lie down', ***leg(y)o-** 'bed'

CELTIC: Old Irish **laig-** 'lies down', Old Irish **lige** 'bed'

OTHER IE LANGUAGES: Greek **lekh-** 'to lie down, lie in bed', Gothic **ligan** 'to lie', English **lie**

SOURCES: T 159, 173, 178; T-E 269, 389, 393; M 236, 237; V 332; B 852-853; KR 330; IEW 658f; LIV 398f; JIES #64; DICT 101

142. lur

'earth, land, soil, dirt'

PRE-BASQUE: ***lur** 'earth' (*recte* ***lurr**)

PROTO-BASQUE: ***ludr-** 'dirt, soil'

PIE: ***l(h_x)u-** / ***luh_x-** / ***leu-** 'mud, dirt'

PROTO-CELTIC: ***lutā** 'mud, dirt'

CELTIC: Old Irish **loth** 'mud, mire, dirt'

OTHER IE LANGUAGES: Albanian **lerë** 'dirt, mud' (< PIE ***leu-d(h)r-**), Albanian **lum** 'slime, mud', Greek **lúthros** 'clotted blood' (< PIE ***leu-d^hr-**), Greek **lūma** 'dirt', Latin **lutum** 'mud, dirt, clay'.

COMMENT: with the same *-d^hr- extension as in Greek and Albanian: ***lud^hr-** > ***ludr-** > ***lurr**.

SOURCES: T 173, 178, 311, 312; T-E 41, 271, 386, 393; M-A 122; M 249; V 355; O 219; B 878; IEW 681; JIES #65; DICT 101

143. luze

'long'

PRE-BASQUE: ***luze** 'long'

PROTO-BASQUE: ***luy(V)tsu-** (or ***luys-**)

PIE: ***d(o)lug^h-**, ***dlong^h-** ²⁵ 'long' > ***dlug^h-(V)to-**

OTHER IE LANGUAGES: Hittite ***taluki-** 'long', Greek **dolikhós** 'long', Latin **longus** 'long', English **long**, Albanian **gjatë** 'long' (< ***dlata** < PIE ***dl(o)ng^h-to-**)

COMMENT: ***dlug^h-(V)to-** > ***luyto-** > ***lutsu** > ***luzi**. See DICT for a detailed discussion.

SOURCES: T 173; T-E 19, 272, 387, 393; M-A 299; V 348; K 819; B 345; O 130; KR 327; IEW 197; JIES #92; DICT 102

²⁵ Not all historical linguists consider PIE ***d(o)lug^h-** and ***dlong^h-** as related (e.g. K, KR and V do; M-A and B don't), but this does not affect the present etymology, which is based on ***dlug^h-** + ***-(V)to-**.

144. neska

'girl'

PRE-BASQUE: ***neska** 'girl'

PROTO-BASQUE: ***γ(e)n-et-ska** (diminutive)

PIE: ***ǵenh₁-** 'to bear, engender, generate' > ***ǵ(e)nh₁-(e)to-**

PROTO-CELTIC: ***genetā** 'girl'

CELTIC: Gaulish **gnata** 'girl', Welsh **geneth** 'girl'

OTHER IE LANGUAGES: Oscan **genetaí** 'to the daughter', German **Kind** 'child'

SOURCES: T 141, 174, 175, 271; T-E 7, 19, 296, 387, 393; M 157; V 260; B 272-273; KR 288; IEW 373f; LIV 163; JIES #68; DICT 107

Loans

145. ainhara (L Z), **añara** (LN), **añari** (S), **ainhera** (LN), **alae** (B), **alai** (B G), **alñari** (R), **añhá(r)a** (Z), **añari** (R S), **añhera** (LN Z), **añhé(r)a** (Z), **añera** (LN), **egabela** (B HN), **egabera** (B HN), **einhera** (L), **elae** (old B), **elai** (B G), **enabera** (B HN), **enada** (B G HN L), **enara** (B Sout G HN L), **enere** (HN), **ernara** (B), **inhade** (L), **iñar** (R S), **inara** (HN), **iñara** (HN), **inhara** (L LN), **iñare** (HN A), **kiñuri** (S), **kinuri** (S), **mañari** (R)

'swallow (*n.*)' (*bird*)

PRE-BASQUE: ***ainnala** / ***ennala** / ***ellana** / ***ellane** / ***aillana** 'swallow' (*recte* ***ennala**)

PROTO-BASQUE: -

PIE: ***wesn-** 'spring' (season)

PROTO-CELTIC: ***wesnālā-** 'swallow' (noun)

CELTIC: Old Irish **fannall** 'swallow', Middle Welsh **gwennawl** 'swallow', Cornish **gwenno** 'swallow'

OTHER IE LANGUAGES: Russian **vesná** 'spring'

COMMENT: a reflex of Proto-Celtic ***wesnālā-** is the obvious source; this must be a loan, because a direct reflex from PIE would yield Pre-Basque ****gennala**.

SOURCES: T 139, 169, 302; T-E 20, 31, 80, 170, 397, 398; M 416; V 663; DERK 517; IEW 1174; JIES #239; DICT 19

146. berun (c), **beraun** (B)

'lead (*n.*)' (*metal*)

PRE-BASQUE: ***berun** / ***belun** / ***beraun** / ***belaun** 'lead' (*recte* ***belun**)

PIE: ***plowdʰo-** 'lead'

PROTO-CELTIC: ***flowdyo-** 'lead'

CELTIC: Middle Irish **lúaide** 'lead'

OTHER IE LANGUAGES: Latin **plumbum** 'lead', English **lead**

COMMENT: a likely **loan** from Latin **plumbum** 'lead', possibly via some Romance source; an original phonetic shape such as ***plun** may have been borrowed as ***belun** via anaptyxis and common p- > b- in early loans²⁶, followed by regular rhotacism of intervocalic *-l- (> **berun**). A direct derivation of Basque **berun** from PIE ***plowdʰo-** is impossible, as *p- would have been lost, yielding ****ludo-** or ****lutsu-** > ****lutzi**).

SOURCES: T 129, 131, 312; T-E 137, 387, 392; M 135; V 474; KR 328; JIES #241; DICT 42

²⁶ compare PERNA > **berna** 'calf, leg', PECCATU > **bekatu** 'sin', PACE > **bake** 'peace', PICE > **bike** 'pitch', etc.

147. *burdina* (L LN), *burdiña* (B HN), *burdiña* (old B), *bürdün* (Z), *bürdüña* (Z), *burduña* (R), *burni* (G), *burnia* (old B Sout), *burña* (R S), *burriña* (HN), *burruña* (R)

'iron'

PRE-BASQUE: ***burdina** 'iron'

OTHER IE LANGUAGES: Latin **ferrum** 'iron' (< *ferso-?)

COMMENT: a loan from some Semitic language, with a likely original shape ***bVrd-**; compare Ugaritic **brdl** 'iron', Amharic **brät** 'iron', Phoenician **barzel** 'iron', Syriac **parzlā** 'iron', Akkadian **parzillu** 'iron'.

SOURCES: T 311; T-E 20, 25, 148, 387, 392; V 214; JIES #242; DICT 46

148. *inurri*, *inhurri*, (t)*xinaurri*, *txingurri*, *zinaurri*

'ant'

PRE-BASQUE: ***(z)inna(g)urri** 'ant' (*recte* ***innaurri**)

PROTO-BASQUE: ***inna vurwi** ?

? PIE: ***morwi-** 'ant'

PROTO-CELTIC: ***sindo-** 'this' + Proto-Celtic ***morwi-** 'ant'

CELTIC: Old Irish **sin** 'this', Gaulish **sinde**, **(s)indas** 'this', Old Welsh **hinn** 'this'; Middle Welsh **myr(r)** 'ant', Cornish **mwrrian** 'ant'

OTHER IE LANGUAGES: Old Norse **maurr** 'ant', Avestan **maori-** 'ant', Russian **muravěj** 'ant'

COMMENT: (t)x- is an expressive / diminutive morph, whence **zinaurri** by back formation. The Pre-Basque form can thus be reconstructed as ***innaurri**; *-urri can be derived regularly from PIE ***morwi** > **vorwi** > **vurwi** > ***urwi** > ***urri**. However, ***inna-** has no obvious Basque or PIE source. A possible explanation is that it is a fossilized, borrowed Celtic article ***hinna** < Proto-Celtic ***sindā** 'this (fem.)'. Borrowing the article alone is very unlikely (and unparalleled in Basque), though, so the whole term ***innaurri** must ultimately go back to an **early Celtic loan** from an original noun phrase ***hinna morwi** 'the ant'.

SOURCES: T 295-296; T-E 226; M 278, 336-337; KR 359; DERK 326; IEW 749; JIES #137; DICT 88

149. *suin* (B), *sui* (G HN), *suhi* (L), *sũhĩ* (Z), *sũhũ* (Z), *sũ* (R), *sĩ* (R)

'son-in-law'

PRE-BASQUE: ***suni** 'son-in-law'

PROTO-BASQUE: *N/A* (see comment)

PIE: ***suh_x-nu-** 'son' < ***seuh_x-** 'to beget'

OTHER IE LANGUAGES: Gothic **sunus**, Old High German **sun**, English **son**

COMMENT: The native Basque reflex of PIE ***suh_x-nu-** is **sehi**, **sein** 'boy, child' (which see): given its vocalism and its specialized meaning, **suin** is probably a loan, presumably from some Germanic (Visigothic?) source. Final *-i in Pre-Basque ***suni** is a common adj. suffix, found e.g. also in ***errani** 'daughter-in-law' > **errain**.

SOURCES: T 271; T-E 342, 389, 394; M-A 211; KR 492; IEW 913f; LIV 538; JIES #-; DICT 121

Summary of historical phonology

This paper uses Pre-Basque (as reconstructed by MICH, T and T-E) as its starting point. Therefore, this section will only provide the sound laws linking Proto-Indo-European to Pre-Basque.

For the sake of legibility, in the present section reconstructed **proto-phonemes are *not* preceded by an asterisk**; for example, proto-phoneme *p is simply written p.

The PIE and Pre-Basque sound systems are readily available (e.g. in M-A and T respectively). An intermediate stage, called *Proto-Basque* in the present research, has been tentatively reconstructed, and can be derived from a first set of sound laws listed below. It should be borne in mind, though, that any reconstructed protolanguage is somewhat arbitrary, since it tries to depict a prehistoric language at some given point in time, whereas the evolution of PIE into Pre-Basque was a continuous *sequence* of diachronic changes. It is therefore more useful to **focus on sound laws** (i.e. the sequence of changes) than on any given sound system at some intermediate stage.

Sound laws will be listed in **chronological order**.

Only **well-attested** sound laws are listed below, whereas scarcely attested sound laws are omitted. For a full discussion of sound laws, please refer to JIES and subsequent “Addenda et corrigenda” published online in Academia.edu.

Main sound laws linking PIE to Proto-Basque

Laryngeals display an unremarkable behavior:

$h_1(e) > e$; $-Vh_1(-) > -V(-)$

$h_2(e) > a$; $eh_2 > a$; exception: $h_2eu > eu$

$h_3(e/o) > o$

m is generally fricativized to /v/ (probably via [ṽ]):

$m > v$

o usually yields **u** (with some exceptions):

$o, \bar{o} > u$ (/o)

Dental stops assibilate before /u/:

$tu, du, d^hu > tsu$

Initial consonant clusters are not permissible:

CC- > CVC- (anaptyxis)

(exception: **st-** > s-).

Non-labial **word-initial plosives** are fricativized:

p- > f- (possibly [ɸ])

t- > θ-

k-, k̂- > x-

b^h- > v- (possibly [β])

d-, d^h- > ð-

g^h- > γ- (exception: $\hat{g}^hC- > gC-$)

while labialized initial consonants generally yield **b**:

k^w-, g^w-, dw- > b-

sw- > b- (exception: $swVr- > sVrw-$)

This set of sound laws **does not apply to verb roots**: any consonant can occur in root-initial position in verbs (T 178-179), because both finite and non-finite verb forms always have one or more prefixes before the root. Since *root*-initial plosives were never *word*-initial in verbs, they follow the next set of sound laws.

Word-medial plosives display different behaviors; well-attested cases include:

- b^h- > -b-
- VpV- > -VfV-
- d- > -ð- *near* e, i; -d- *near* o, u
- d^h- > -θ- *near* i; -d- *elsewhere*
- g- > -g-
- g^{wh}- > -g-
- ġ- > -g-
- ġ^h- > -k-
- k^w- > -b-

Final **-s** is lost after vowels:

- Vs > -V

Word-medial **consonant clusters** undergo several simplifications and changes; a notable one is the following:

- st- > -s- *in pre-tonic position*, -st- *in post-tonic position*

Vowels are generally preserved, except:

- er, ēr > ar *in closed syllables*
- en > an
- (-)el- > (-)al- (exception: ell > ill)
- ei > e

Proto-Basque - the proto-language obtained by applying the above sound laws - is still recognizably Indo-European. Its evolution into Pre-Basque, on the other hand, involves dramatic sound changes that will obscure its origins.

Main sound laws linking Proto-Basque to Pre-Basque

The main phenomenon is the **loss of all fricatives** (apparently except medial -θ- which later evolves to /z/):

f > ∅

θ- > ∅-

x- > ∅-

v- > ∅-

ð > ∅

γ- > ∅-

This set of sound laws is probably the main reason why Basque is so hard to recognize as an IE language: while the loss of word-medial fricatives is a widespread phenomenon (e.g. in several Romance languages, notably in French), the loss of word-initial fricatives is much less frequent in IE languages – the most notable exception being the loss of PIE *p- (via *f-) in Celtic.

Sibilants undergo some simplifications and conditioned palatalization:

tsu- > zu-

-(t)su(-) > -(t)zu(-) /-(t)zi(-)

s > s *before e and after i, e*; z *elsewhere*

ts > ts *after i, e*; tz *elsewhere*

w (whether primary, or secondary from **uV**) becomes g:

w > g

Word-medial **θ** becomes z:

-θ- > -z-

Vowels undergo several further changes:

-V > -∅ *in words with more than two syllables - and sporadically in disyllabic words, too*

Vu > V

a- > i- *in pre-tonic position*

e- > ∅- *in pre-tonic position*

Consonant clusters undergo several simplifications and changes; notable ones include:

-**Vktz-** > -Vitz-

-**rs-** > -s- (see T 163)

-**rst(-)** > -rtz(-) / -st(-)

-**rw-** > -rr(-)

-**ly-** > -rr-

-**lC-** > -ll-