

Secret Languages in North Wales

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It is desirable in many situations to keep private the content of a conversation which must of necessity take place in the presence of others. Parents may, for instance, wish to talk to each other without the children understanding what they are saying, and on the other hand, children may wish to keep secrets from adult ears. This aim can be achieved very simply and effectively by the use of a 'secret language', where the normal form of the message is distorted in some way. It can be easily decoded by those in the know, while remaining completely opaque to outsiders.

The strategies used are usually straightforward. An additional segment or syllable may be inserted at a set point in each word; a segment or syllable may be shifted to a different position in the word; or some of the original words of the message may be replaced completely in a predetermined fashion. Examples of all three types, based of course on English, are given by Iona and Peter Opie (1959: 320-322), and Otto Jespersen quotes examples based on a number of other languages - French, Danish, Dutch and Maori (1922: 149-150). Clearly this is a widespread phenomenon, found in many different cultures.

What then of Wales, and secret languages based on Welsh? A number of related examples, all used in South Wales, have been described in a previous paper (Awbery, 1984a), and recent fieldwork has revealed the widespread use of secret languages in North Wales too. It is this new material from North Wales which will be discussed here, with attention to the social context of use, the strategies employed to disguise the message, and the implication of these distorted forms for certain general problems of Welsh phonology.

A. Backslang

These northern secret languages fall into two distinct types. The first, commonly known as **Backslang**, was noted in the locations shown on the map, in both Gwynedd and Clwyd.¹ It appears to have been most commonly used by schoolchildren, at primary and secondary school, either to preserve secrets from outsiders or just as a game. In other cases it was used by parents in order to communicate effectively without the children understanding what was being said, and in one instance Backslang was used by a group of shop assistants so that they could talk to each other privately in the presence of customers. Occasionally it was used purely for fun by a groups of friends or neighbours. In only one case was it possible to trace this secret language back as far as the turn of the century. Most informants had used it during the years between the wars and in the 1940s, with a few families continuing to do so after

1950. No-one admitted to using Backslang now, and most said that they were very rusty, as they had not thought about it at all for many years.

The most common name for this secret language was **Backslang**, noted several times in the Caernarfon area, and in Porthmadog, Pwllheli and Aberdyfi. **Double Dutch** was the local name however in Arthog and Corwen. These are both clearly English names, and may indicate an English origin for this code. Otherwise, one speaker in Nefyn referred to **Iaith nôl ac ymlaen** (to and fro language), and another in Llithfaen spoke of **Siarad yn chwithig** (talking backwards). Several people had no specific name for the language, and in other cases information on this point is lacking.

How Backslang Works

Compare the basic form of the following expression with its form when converted into Backslang.

- 1a. Bore da.
['boɾɛ 'da:]
'Good morning.'
- 1b. Orebo ada.
['ɔɾɛ'bo: 'a:'da:]

For each word any initial consonant or cluster is dropped. At the same time an additional stressed syllable is tacked on to the end of the word, consisting of the consonant or cluster dropped from initial position, and a copy of the vowel which originally followed it. This copied vowel is always long.²

- 2. ['boɾɛ 'da:]
 ↓ ↘ ↓ ↘
 ['ɔɾɛ'bo: 'a:'da:]

Here are some further examples, all for the moment monosyllabic, to illustrate the implications of this brief description a little more fully.

- 3. bach [ba:χ] ['a:χ'ba:] 'small'
- braf [bra:v] ['a:v'bra:] 'fine'
- garn [garn] ['arn'ga:] 'crag'
- plant [plant] ['ant'pla:] 'children'

Note that both single consonants and clusters are dropped from initial position, and that the copied vowel is long, regardless of whether the original is long as in [ba:χ] or short as in [garn]. If there is no initial consonant in the original, then the vowel is copied on its own to form the new, stressed final syllable.

- 4. a [a:] ['a:'a:] 'and'
- at [at] ['at'a:] 'to'
- allt [a:t] ['a:t't'a:] 'hill'

And though the vowel quality has been kept constant in these examples, the strategy can of course apply freely regardless of which vowel is in the original.

5.	<u>hi</u>	[hi:]	['i:'hi:]	'she'
	<u>dde</u>	[ðe:]	['e:'ðe:]	'right'
	<u>môr</u>	[mo:r]	['o:r'mo:]	'sea'
	<u>dŵr</u>	[du:r]	['u:r'du:]	'water'
	<u>stryd</u>	[stri:d]	['i:d'stri:]	'street'
	<u>dim</u>	[dim]	['im'di:]	'nothing'
	<u>nes</u>	[nɛs]	['ɛs'ne:]	'until'
	<u>ffordd</u>	[fɔrð]	['ɔrð'fo:]	'road'
	<u>wrth</u>	[ʊrθ]	['ʊrθ'u:]	'to'
	<u>yr</u>	[əɾ]	['əɾ'ə:]	'the'

Turning from monosyllables to longer forms, we find the same pattern. Once again the initial consonant or cluster is dropped, and a new, stressed syllable is added in final position, consisting of the dropped consonant or cluster and a copy of the vowel following it.

6.	<u>gallu</u>	['gɑɫi]	['ɑɫi'ga:]	'to be able'
	<u>castell</u>	['kɑstɛɫ]	['ɑstɛɫ'ka:]	'castle'

This copied vowel is again always long, even though in this part of North Wales the penultimate vowel of a word - as this is in the original - is regularly short.

7.	<u>allan</u>	['ɑɫan]	['ɑɫan'a:]	'out'
	<u>ardal</u>	['ɑrdal]	['ɑrdal'a:]	'district'

If there is no initial consonant, then the vowel is copied alone to give the new final syllable. And, once again, Backslang may apply freely regardless of the quality of the original vowel.

8.	<u>milltir</u>	['miɫtir]	['ɪɫtir'mi:]	'mile'
	<u>gennym</u>	['gɛnɪm]	['ɛnɪm'ge:]	'with us'
	<u>paned</u>	['pɑnɛd]	['ɑnɛd'pɑ:]	'cupful'
	<u>bwrw</u>	['buru]	['uru'bu:]	'to rain'
	<u>gyda</u>	['gɪdɑ]	['ɪdɑ'gɪ:]	'with'
	<u>fyny</u>	['vɛni]	['ənɪ'vɛ:]	'up'

Note that the stress pattern of the original form is irrelevant to the operation of Backslang. In a monosyllable the vowel to be copied carries word stress, and so too when it appears in the penultimate syllable of a dissyllabic form. This stress remains in the Backslang version, and the new stressed final syllable coexists with this original stress pattern.

9.	<u>môr</u>	[mo:r]	['o:r'mo:]	'sea'
	<u>bwrw</u>	['buru]	['uru'bu:]	'to rain'

If the vowel to be copied is in the antepenultimate syllable of a trisyllabic form then it will be unstressed in the original and remain unstressed in the Backslang version. The new final syllable will of course be stressed.

10. Nadolig [na'dolɪg] [a'dolɪg'na:] 'Christmas'

Glides and Diphthongs

The status of glides and diphthongs in Welsh phonology is somewhat problematic. Traditionally, falling diphthongs have been analysed as single phonemic units, and prevocalic glides as consonants. I have recently argued that this approach is mistaken, and have suggested rather that the available evidence points to another, more symmetrical analysis. On this view, all glides are consonantal regardless of whether they precede or follow a vowel, and a falling diphthong is therefore not a single unit but rather a vowel-consonant sequence.³

The Backslang material collected in North Wales confirms this view, in that it treats all glides as consonants. First then, examples where the glide precedes the vowel.

11. chwith [χwi:θ] ['i:θ'χwi:] 'left'
sgwâr [sgwa:r] ['a:r'sgwa:] 'square'
iach [ja:χ] ['a:χ'ja:] 'healthy'

The glide is dropped from initial position, along with any other consonants forming a cluster, and shows up only in the new final syllable. As usual, this holds equally for longer forms as well as for monosyllables.

12. chwarae ['χwaraɟ] ['araɟ'χwa:] 'to play'
gwartheg ['gwarθɛg] ['arθɛg'gwa:] 'cattle'
wedi ['wedi] ['ɛdi'we:] 'after'

This pattern would of course be expected on the traditional view of prevocalic glides. What would not be expected is the pattern found with those in postvocalic position.

Where the original form of the word contains a falling diphthong, this does not behave as a single unit but rather as a complex sequence consisting of vowel and a following consonant. The vowel alone is copied into the new, stressed final syllable. The glide is left behind just like any other consonant.

13. rhaid [r_ajd] ['ajd'r_a:] 'need'
mawr [mawr] ['awr'ma:] 'big'
hwyl [hu:ɟl] ['u:ɟl'hu:] 'fun'
troi [trɔj] ['ɔj'tro:] 'to turn'
llaw [ɫaw] ['aw'ɫa:] 'hand'
oedd [ɔjð] ['ɔjð'o:] 'he/she was'

These are all monosyllabic examples, but the same pattern holds of longer forms too.

14.	<u>neithiwr</u>	['nejθjur]	['ejθjur'ne:]	'last night'
	<u>llawer</u>	['ɫawɛr]	['awɛr'ɫa:]	'a lot'
	<u>oeddw'n</u>	['ɔjðɔn]	['ɔjðɔn'o:]	'I was'
	<u>awyr</u>	['awɪr]	['awɪr'a:]	'air'

If glides are appropriately analysed as consonants, then these forms are predictable, and in no way surprising. The Backslang forms confirm an analysis originally suggested in the light of quite different 'normal' data.

One final example of this type: where there are two glides in a sequence, one preceding and the other following the vowel, both behave in the expected, consonantal fashion.

15.	<u>iawn</u>	[jawn]	['awn'ja:]	'right'
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Rule Ordering

If we assume that Backslang is implemented by a phonological rule which distorts the original form of the word, then the question immediately arises of when this rule applies. At what stage in the derivation is this rule invoked? The North Wales data suggest very strongly that this happens at a late stage in the derivation, after all the other rules which affect the form of the individual word. This ordering can be illustrated by the interaction of Backslang with a number of other rules which show up in the available material.

First the rule of Raising⁴, which account for alternations such as the following.

16.	<u>gallt</u>	[ga:ɫt]	'slope'
	<u>gelltydd</u>	['gɛɫtɪð]	'slopes'

An underlying open vowel is raised to mid-front position under the influence of a high central or high front vowel in the final syllable. What then of the Backslang form corresponding to ['gɛɫtɪð]?

17.	['ɛɫtɪð'ge:]
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Clearly the vowel which is copied into the new, stressed final syllable is the one which results from prior application of Raising. The derivation will run as follows.

18.		['gaɫtɪð]
	Raising	['gɛɫtɪð]
	Backslang	['ɛɫtɪð'ge:]

A very similar situation arises over two other rules which change the quality of the penultimate vowel. One of them, Diphthong Fronting⁵, accounts for the following alternation.

19. paid [paɪd] 'don't' (sg.)
peidiwch ['peɪdjuːχ] 'don't' (pl.)

The underlying diphthong [aɪ] is raised to [eɪ] in the penultimate syllable. The other rule, Centralisation⁶, covers such pairs as the following.

20. cynt [kɛnt] 'sooner'
cynta ['kəntə] 'first'

An underlying high vowel is centralised when it appears in the penultimate syllable. If we now look at the relevant Backslang forms, it becomes clear that the vowel copied by Backslang has already undergone Diphthong Raising or Centralisation.

21. ['eɪdjuːχ'pe:]
['əntə'kə:]

A rather different type of rule is Antepenultimate Deletion⁷, which accounts for alternations such as these.

22. cwpan ['kʊpən] 'cup'
paned ['pənɛd] 'cupful'

Consider the Backslang form of ['pənɛd]

23. ['anɛd'pɑ:]

Only if Antepenultimate Deletion applies first can the Backslang rule give the correct result, as this is the only ordering that gives word initial [pɑ] in time.

24. Antepenultimate Deletion [kʊ'pənɛd]
Backslang ['pənɛd]
['anɛd'pɑ:]

Another rule, Vowel Epenthesis⁸, breaks up unacceptable final clusters in monosyllables, and in this way accounts for pairs such as the following.

25. ochor ['ɔχɔr] 'side'
ochra ['ɔχrɑ] 'sides'

Here is the relevant Backslang form of ['ɔχɔr].

26. ['ɔχɔr'o:]

If Vowel Epenthesis applies first, then there will be no difficulty in generating this form.

27.		['ɔχr]
	Vowel Epenthesis	['ɔχɔr]
	Backslang	['ɔχɔr'o:]

The reverse ordering would require an otherwise unnecessary extension of Vowel Epenthesis to enable it to apply in this one instance to polysyllabic forms.

I have argued elsewhere that glides, which are consonantal in the surface phonology, should be derived from underlying vowels by the rule of Glide Formation⁹. This rule accounts, among other facts, for the alternative realisations of the 2pl. inflection in (28) and of the infinitive in (29).

28.	<u>dowch</u>	[dowχ]	'you come' (pl.)
	<u>gwelwch</u>	['gwɛluχ]	'you see' (pl.)
29.	<u>troi</u>	[trɔj]	'to turn'
	<u>colli</u>	['kɔ+i]	'to lose'

In the underlying form such segments are vocalic; after the rule applies they are consonantal. It has already been shown that Backslang treats glides as consonants, giving the Backslang forms below.

30.	['owχ'do:]
	['ɔj'tro:]

Clearly then Backslang must follow Glide Formation in the derivation.

31.		[douχ]
	Glide Formation	[dowχ]
	Backslang	['owχ'do:]

Also relevant here is Stress Assignment¹⁰, the rule which specifies that word stress is to be carried on monosyllables and on the penultimate syllable of longer forms. It was shown earlier, in examples (9) and (10), that this pattern is retained in the Backslang forms, with an added stress on the new, final syllable. This output can easily be generated if we allow Stress Assignment to apply first, with Backslang following on later.

32.		[mo:r]	[buru]	[nadolɪg]
	Stress Assignment	['mo:r]	['buru]	[na'dolɪg]
	Backslang	['o:r'mo:]	['uru'bu:]	[a'dolɪgna:]

Finally, we have the Word Structure Rules¹¹, which specify predictable vowel length. In monosyllables vowel length is contrastive before a single sonorant, and this contrast is retained in the Backslang form.

33.	<u>dŵr</u>	[du:r]	['u:r'du:]	'water'
	<u>dan</u>	[dan]	['an'da:]	'under'

Vowel length in other monosyllables, however, is predictable. Before a voiced stop, for instance, the vowel must be long; before a voiceless stop the vowel must be short. Here again the expected vowel length is retained in the Backslang form.

34.	<u>dod</u>	[do:d]	['o:d'do:]	'to come'
	<u>sut</u>	[sɪt]	['ɪt'si:]	'how'

In polysyllables vowel length is also predictable, being uniformly short in both stressed and unstressed syllables.

35.	<u>bore</u>	['boɛ]	['ɔɛ'bo:]	'morning'
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If the Word Structure rules apply first, specifying predictable vowel length, then there is no difficulty; Backslang simply carries out the appropriate changes, leaving vowel length well alone.

36.		[dod]	[sɪt]	['boɛ]
	Word Structure	[do:d]	[sɪt]	['boɛ]
	Backslang	['o:d'do:]	['ɪt'si:]	['ɔɛ'bo:]

Phonotactic Restrictions

Backslang then applies late in the derivation. In view of this, it is interesting that the Backslang rule itself appears to ignore two otherwise rigid phonotactic restrictions, generating forms which would not in the normal way be acceptable in Welsh. Clearly it is in some way exempt from the normal pattern of restrictions; maybe at this late stage in proceedings it can escape, if their controlling influence is limited to the block of phonological rules which determine the internal shape of individual words.

The first of these restrictions relates to the central vowel. With very few exceptions, this is normally confined to nonfinal syllables where it is followed by at least one consonant¹². As the following examples show however, this is not true of Backslang forms.

37.	<u>cynta</u>	['kənta]	['ənta'kə:]	'first'
	<u>fyny</u>	['vəni]	['əni've:]	'up'
	<u>ysgol</u>	['əsgɔl]	['əsgɔl'ə:]	'school'

Here we find the central vowel in a word-final syllable, with no following consonant, a totally abnormal pattern for Welsh. The central vowel is furthermore in the normal way always specified as short, but in these Backslang forms the copied vowel in the final position is of course long, and we have therefore an otherwise impossible long central vowel.

The second restriction ignored by the Backslang rule relates to word stress. The normal pattern for Welsh is to have one fully stressed syllable per word. Backslang forms however contain two fully stressed syllables. The original stress is retained, and the final copied syllable now receives full stress too. The result is very strange by normal Welsh standards.

Initial Mutations

The discussion so far has been limited to the level of the individual word. These words however normally appear in longer sequences, such as phrases and sentences, and there are certain problems which can only be tackled when this wider context is taken into account. What, for instance, happens to the Initial Mutations¹³ in Backslang?

There appear in fact to be two options. In many cases those initial mutations which would be expected in the basic form are retained in the Backslang equivalent. First the Soft Mutation.

- 38a. ffarm gyntaf
[fɑrm 'gəntav]
'first farm'
38b. ['ɑrm'fa: 'əntav'gə:]

Here the adjective [kəntav] immediately follows a fem. sg. noun, and undergoes Soft Mutation to ['gəntav]. This mutation is then retained in the Backslang form ['əntav'gə:]. There is no difficulty in generating the correct output if we assume simply that Mutation applies before Backslang.

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| 39. | | ['kəntav] |
| | Soft Mutation | ['gəntav] |
| | Backslang | ['əntav'gə:] |

Other morphological contexts requiring the Soft Mutation behave identically. In some cases the mutation is triggered by a particular lexical item, such as the definite article [ə], the predicative particle [ən], or the sentential particle [ve].

- 40a. dan y bont
[dan ə bɔnt]
'under the bridge'
40b. ['ɑn'dɑ: 'ə:'ə: 'ɔnt'bo:]
- 41a. Mae'r môr yn las.
[maj r mo:r ən la:s]
'The sea is blue.'
41b. ['əj'mɑ: 'ər'ə: 'o:r'mo: 'ən'ə: 'a:s'la:]

- 42a. Fē gollais fy nhad.
[və 'gɔʔajs və nɦa:d]
'I lost my father.'
42b. [e've: 'ɔʔajs'go: 'ə:və: 'a:d'nɦa:]

In all these forms the mutation shows up in both the basic form and the Backslang equivalent. We find, for instance, [bɔnt] and ['ɔnt'bo:] rather than the unmutated [pɔnt] in (40); similarly [lɑ:s] and ['a:s'lɑ:] instead of the unmutated form [glɑ:s] in (41); and ['gɔʔajs] and ['ɔʔajs'go:] for ['kɔʔajs] in (42).

Elsewhere the mutation is triggered by syntactic considerations of a more general nature. In (43), for instance, the direct object of an inflected verb undergoes Soft Mutation.

- 43a. Cefais bleser ...
['keɤajs 'blɛsɛr ...]
'I got pleasure ...'
43b. ['evajs'ke: 'ɛsɛr'ble: ...]

And in (44) the postponed subject of a sentence is mutated.

- 44a. Oedd gennym ni fodryb.
[ɔjð 'gɛnɪm ni 'vɔdrɪb]
'We had an aunt.'
44b. [ɔjð'o: 'ɛnɪm'ge: 'i:ni: 'ɔdrɪb'vo:]

As before the mutation shows up in both the basic form and the Backslang version. We have ['blɛsɛr] and ['ɛsɛr'ble:] rather than the unmutated ['plɛsɛr] in (43), ['vɔdrɪb] and ['ɔdrɪb'vo:] rather than the unmutated ['mɔdrɪb] in (44). Clearly the principle of keeping the mutation holds regardless of what kind of triggering context is involved.

Nor is the Soft Mutation the only one to be retained in the Backslang form. This is true also of the Nasal Mutation.

- 45a. fy nhad
[və nɦa:d]
'my father'
45b. [ə:'ə: 'a:d'nɦa:]

Here the noun [tɑ:d] immediately follows the 1sg. possessive pronoun, and is mutated to [nɦa:d], with the Backslang form retaining the mutation. Similarly with the Aspirate Mutation.

- 46a. a throi wedyn
[a θrɔj 'wɛdɪn]
'and turn afterwards'
46b. [a 'ɔj'θro: 'ɛdɪn'we:]

The uninflected verb [trɔj] immediately follows the conjunction [a], and is mutated to [θrɔj]. The Backslang form ['ɔj'θro:] retains this mutation.

There is a considerable body of evidence then that the mutation rules should precede Backslang. All three mutation types - the Soft Mutation, the Nasal Mutation and the Aspirate Mutation - are retained in the Backslang form, and this in a wide variety of triggering contexts. Unfortunately however the picture is not quite as simple as this might suggest. There are numerous examples where the expected mutation does not show up in the Backslang form; what we find rather is the original unmutated initial consonant. Consider the following example.

- 47a. dros filltir
 [drɔs 'vɪɫtɪr]
 'over a mile'
 47b. ['ɔsdro: 'ɪɫtɪrmi:]

The noun ['mɪɫtɪr] immediately follows the preposition [drɔs] and would normally be expected to undergo Soft Mutation to ['vɪɫtɪr] as in (47a). In the Backslang equivalent however it is the radical initial that surfaces as ['ɪɫtɪr'mi:]. Elsewhere it may be the Nasal Mutation that is missing.

- 48a. fy nhaid
 [və nhajd]
 'my grandfather'
 48b. ['ə:və: 'ajd'ta:]

The noun [təjd] immediately follows the 1sg. possessive pronoun, and should undergo the Nasal Mutation as in (48a). What we actually find in the Backslang version however is the radical form ['ajd'ta:].

One could assume that such forms merely reflect random failure of the Mutation rules. A more interesting possibility however is that they result from a reversal of the rules ordering suggested above. The Backslang rule, that is, here precedes the Mutation rule.

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| 49. | | ['mɪɫtɪr] | ['mɪɫtɪr] | [təjd] | [təjd] |
| | Backslang | | ['ɪɫtɪr'mi:] | | ['ajd'ta:] |
| | Mutation | | - | | - |

The Backslang rule applies first and distorts the basic form of the words involved in such a way that the Mutation rule is simply blocked. It is of course formulated to deal with consonant-initial forms; what we have here once the Backslang rule has applied are word-initial vowels.

On this view then the presence or absence of overt Initial Mutations in Backslang is directly related to the rule ordering adopted in the derivation. The Mutations may precede the Backslang rule, or the reverse may occur, with the Backslang rule

applying first, before the Mutations. The plausibility of this account is given a considerable boost by the fact that an exactly parallel explanation appears to work for another, superficially disparate set of alternations, to which we now turn.

Sandhi Forms

A second set of alternations requiring reference to the wider context in which a word appears concerns the varying shape of certain grammatical items.¹⁴ The definite article, for instance, has three distinct forms. Immediately following a vowel it is [r].

50. i'r chwith
[i:r χwi:θ]
'to the left'

Otherwise it is [ə] before a consonant, and [ər] before a vowel.

51. y castell
[ə 'kastɛɬ]
'the castle'

52. yr ardal
[ər 'ardal]
'the district'

These variants can easily be derived if we assume that the underlying form of this lexical item is [ər], the other two forms [ə] and [r] are then derived by Sandhi Rules which take account of the adjacent context.

There appears however to be some inconsistency in the treatment of such sandhi forms in Backslang. On the one hand we have examples such as the following.

- 53a. i'r chwith
[i:r χwi:θ]
'to the left'
- 53b. ['i:'ri: 'i:θ'χwi:]
- 54a. roi y tegell
[rɔj ə 'tegeɬ]
'to put the kettle'
- 54b. ['ɔj'ro: 'ə:'ə: 'egeɬ'te:]

These can be explained quite straightforwardly as resulting from the application first of Sandhi Rules, and then of Backslang.

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| 55. | | [i: ər χwi:θ] | [rɔj ər 'tegeɬ] |
| | Sandhi | [i:r χwi:θ] | [rɔj ə 'tegeɬ] |
| | Backslang | ['i:'ri: 'i:θ'χwi:] | ['ɔj'ro: 'ə:'ə: 'egeɬ'te:] |

On the other hand we find examples where the reverse ordering appears to hold.

- 56a. i fyny'r gelltydd
[i 'vəni r 'gɛtɪð]
'up the slopes'
- 56b. [i 'əni'və: 'ər'ə: 'ɛtɪð'ge:]
- 57a. dan y bont
[dan ə bɔnt]
'under the bridge'
- 57b. ['an'da: 'ər'ə: 'ɔnt'bo:]

Here Backslang has applied first. The Sandhi Rules are now blocked as the definite article is distorted from its normal basic form [ər], and no longer fits the formulation of these rules.

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|-----|-----------|-------------------------------|---------------------------|
| 58. | | [i 'vəni ər 'gɛtɪð] | [dan ər bɔnt] |
| | Backslang | [i 'əni'və: 'ər'ə: 'ɛtɪð'ge:] | ['an'da: 'ər'ə: 'ɔnt'bo:] |
| | Sandhi | ----- | ----- |

Other grammatical items display the same ambivalence over rule ordering. Take, for instance, the conjunction 'and' which normally appears as [a] before a consonant and as [ak] before a vowel.

59. bachgen a merch
['baxgɛn a mɛrɕ]
'a boy and a girl'
60. afal ac oren
['aval ak 'ɔrɛn]
'an apple and an orange'

We may assume that the underlying form is [ak], with [a] derived by a Sandhi Rule which takes account of the wider context. In some examples it is clear that the Sandhi Rule applies first.

- 61a. a throi
[a θrɔj]
'and turn'
- 61b. [a 'ɔj'θro:]

The derivation of such a form appears to be as follows.

- | | | |
|-----|-----------|--------------|
| 62. | | [ak θrɔj] |
| | Sandhi | [a θrɔj] |
| | Backslang | [a 'ɔj'θro:] |

In other cases Backslang applies first, and the Sandhi Rule is blocked.

- 63a. a ffordd haearn fach
 [a fɔrð 'həjərn vɑ:χ]
 'and little iron road'
 63b. ['ak'a: 'ɔrðfo: 'əjərn'he: 'a:χ'va:]

The derivation of this form runs rather as follows.

64. [ak fɔrð]
 Backslang ['akɑ: 'ɔrð'fo:]
 Sandhi -----

In the case of [ak]/[a] it is the immediately following context that is relevant. Another item, which looks to the preceding context but otherwise behaves in an identical fashion is the predicative particle [ən]. Here again, in some cases the Sandhi Rule applies first.

- 65a. Mae hi'n dywydd braf.
 [məj hi:n 'dəwɪð bra:v]
 'It is fine weather.'
 65b. ['əj'mɑ: 'i:'hi:n 'əwɪð'də: 'a:v'bra:]

The derivation in this case runs quite simply.

66. [məj hi: ən 'dəwɪð bra:v]
 Sandhi [məj hi: n 'dəwɪð bra:v]
 Backslang ['əj'məj 'i:'hi:n 'əwɪð'də: 'a:v'bra:]

In other cases it appears that the reverse ordering must hold.

- 67a. Mae hi'n braf.
 [məj hi:n bra:v]
 'It is fine.'
 67b. ['əj'məj 'i:'hi: 'ən'ə: 'a:v'bra:]

The derivation must go as follows if this form is to be correctly generated.

68. [məj hi: ən bra:v]
 Backslang ['əj'məj 'i:'hi: 'ən'ə: 'a:v'bra:]
 Sandhi -----

It appears then that the rule implementing Backslang must follow those phonological rules which relate to the internal structure of the word. Its ordering relative to those rules which adapt the individual word to its context, however, may vary from one speaker to another. It may precede this set of rules, as shown in (69).

69. Word-Internal Rules
Backslang
Mutation and Sandhi Rules

On this approach, it forms the last stage of word-level phonology, but has nothing to do with higher levels. Alternatively it may follow the Mutation and Sandhi rules too, as shown in (70), to form probably the last stage in the entire phonological component.

70. Word-internal Rules
Mutation and Sandhi Rules
Backslang

Morphological Structure

An issue ignored so far is the extent to which the morphological structure of a word affects the operation of Backslang. Is the rule implementing Backslang sensitive to morphological boundaries, or does it apply to the whole word regardless of its internal structure? For ordinary lexical items, the answer appears to be that the internal morphological structure of a word is irrelevant; simple and complex forms behave alike. The examples in (71), for instance, all consist of one single morpheme, while those in (72) consist of two morphemes. Both sets undergo Backslang in an identical fashion.

- | | | | | |
|-----|-----------------|------------|---------------|---------------|
| 71. | <u>ardal</u> | ['ardal] | ['ardal'a:] | 'district' |
| | <u>gorffen</u> | ['gɔrfɛn] | ['ɔrfɛn'go:] | 'to finish' |
| 72. | <u>gennym</u> | ['gɛnɪm] | ['ɛnɪm'ge:] | 'with us' |
| | <u>peidiwch</u> | ['pejdjuχ] | ['ejdjuχ'pe:] | 'don't' (pl.) |

In a very few cases only do we find word-internal boundaries taken into account.

- | | | | | |
|-----|------------------|------------|--------------------|-------------|
| 73. | <u>backslang</u> | ['baksɫaŋ] | ['ak'ba:'aŋ'sla:] | 'backslang' |
| | <u>unawdau</u> | [ɪn'awdaɟ] | ['i:n'i:'awdaɟ'a:] | 'solos' |

When we turn to placenames the picture is rather different. Morphologically simple forms undergo Backslang in the normal way.

- | | | | |
|-----|---------------|-----------|-------------|
| 74. | <u>Dinas</u> | ['*dinas] | ['inas'di:] |
| | <u>Bethel</u> | ['*bɛθɛl] | ['ɛθɛl'be:] |
| | <u>Nefyn</u> | ['*nevɪn] | ['ɛvɪn'ne:] |

So too do those dissyllabic forms, with normal penultimate stress, which can be analysed into more than one morpheme.

75. Groeslon [*grɔ̃slɔ̃n] ['ɔ̃slɔ̃n'gro:]
Cilgwyn [*'kɪlgwɪn] ['ɪlgwɪn'ki:]
Llithfaen [*'tʰiθvaj̃n] ['iθvaj̃n'tʰi:]

Where the placename consists of three or more syllables however, its morphological structure is relevant, and the rule implementing Backslang applies separately to the individual morphemes involved.

76. Bontnewydd [*bɔ̃nt'nɛwɪð] ['ɔ̃nt'bo: 'ɛwɪð'ne:]
Llandwrog [*'tʰan'durɔ̃g] ['an'tʰa: 'urɔ̃g'du:]
Rhostryfan [*'r̥os'trəvan] ['os'r̥o: 'əvan'trə:]

Why should this happen? It seems unlikely that the differing treatment of such forms is simply a result of their greater length, since a trisyllabic item like [nə'dɔlɪg] is handled as a single unit in Backslang. It seems more likely that they are treated as phrasal units rather than single words, with each unit in the phrase undergoing Backslang on its own account. This view receives some support from other placenames, whose final stress pattern is again suggestive of phrasal structure. These too are split up in the same way for the purposes of Backslang.

77. Waunfawr [*waj̃n'vawr] ['aj̃n'wa: 'awr'va:]
Penygroes [*pɛnə'grɔ̃js] ['ɛnə'be: 'ɔ̃js'gro:]

How Thoroughly is Backslang Applied?

There is considerable variation in how thoroughly the rule of Backslang is implemented. At one extreme we find a speaker who applies it only to the most important items in a sentence, leaving most of the sequence alone.

78. A mi 'dach chi'n dŵad trw ['ə̃nɔ̃g'klə: 'awr'va:] a heibio pen
 ['ɛvɔ̃r'tre:], ac yn ych blaen am ['iθvaj̃n'tʰi:] ...
 'And you come through Clynnog Fawr, and past the top of Trefor, and on to Llithfaen ...'

Other speakers are more thorough in their approach, and try to alter the shape of every word in the sentence.

- 79a. Fuest ti allan gyda rhywun neithiwr?
 ['vi:ɛst ti 'a'tʰan 'gɪda 'r̥.ɪwɪn 'neɪθjʊr]
 'Were you out with someone last night?'
 79b. ['i:ɛst'vi: 'i:'ti: 'a'tʰan'a 'ɪda'gɪ: 'ɪwɪn'r̥.u: 'eɪθjʊrne:]

There is also an intermediate position, where a few words, usually grammatical items, are left alone.

- 80a. Oedd gennym ni fodryb a oedd yn chwarae ...
 [ɔjð ɡɛnɪm ni: 'vɔdrɪb a ɔjð ən 'χwaraɪ]
 'We had an aunt who used to play ...'
 80b. [ɔjð'o: 'ɛnɪm'ge: 'i:'ni: 'vɔdrɪb'vo: a ɔjð'o: ən 'araj'χwa:]

Clearly there is scope for individual variation and choice in how this skill is used.

B. Cleversticks

The second type of secret language found in North Wales turned up in only two locations, as shown on the map.¹⁵ One of the informants using it was from Talysarn, near Caernarfon; the other's family came originally from Trawsfynydd, moving later to Tanygrisiau. Interestingly, this code is more or less identical to one previously recorded in South Wales, at Llangeitho in Dyfed. This southern version coexisted with a number of other, similar codes in the surrounding area, but no such related versions have been recorded in the north.

The informant from Talysarn referred to this code as **Cleversticks**. She had used it at school in the 1920s and 1930s with a small group of girlfriends, primarily to keep secrets, and she has continued to use it regularly with one of them. The other informant had no specific name for the code. She had been taught to use it at home by her father in the 1930s, as a fireside game. He in turn had picked it up from his parents, who used it just before the turn of the century, in an attempt to communicate secretly in front of their children.

How Cleversticks Works

Compare the basic form of the following expression with its form when converted into Cleversticks.

- 81a. Bore da.
 ['bɔrɛ 'da:]
 'Good morning.'
 81b. ['bɔɔɔ'rɛɛɛ 'daga]

This is clearly a very different process from the Backslang described earlier. The consonant [g] is inserted into every syllable, together with a copy of the original vowel. There are in fact two ways of describing the change. We may see it as inserting a [Vg] sequence before the original vowel of the syllable, or as inserting a [gV] sequence after the original vowel.¹⁶

82. [da:] [da:]
 | |
 ['daga] ['daga]

There does not seem any particular reason for choosing either of these two possibilities rather than the other, and the issue will accordingly be left open.

This process applies freely regardless of the syllable structure of the inflected form. There may be an initial consonant or cluster, a final consonant or cluster, both or neither.

83.	<u>dod</u>	[do:d]	['dɔɔɔd]	'to come'
	<u>gloch</u>	[glo:χ]	['glɔɔɔχ]	'bell'
	<u>ffordd</u>	[fɔɔrð]	['fɔɔɔrð]	'road'
	<u>ôl</u>	[o:l]	['ɔɔɔl]	'back'
	<u>ond</u>	[ɔɔnd]	['ɔɔɔnd]	'but'
	<u>o</u>	[o:]	['ɔɔɔ]	'from'

It is also unaffected by the quality or length of the original vowel.

84.	<u>nid</u>	[nɪd]	['nɪɔɔɔd]	'not'
	<u>stryd</u>	[stri:d]	['striɔɔɔd]	'street'
	<u>cwm</u>	[kʊm]	['kʊɔɔɔm]	'valley'
	<u>hen</u>	[he:n]	['heɔɔɔn]	'old'
	<u>yn</u>	[ən]	['əɔɔɔn]	'in'
	<u>dros</u>	[drɔɔs]	['drɔɔɔs]	'over'
	<u>da</u>	[da:]	['daɔɔɔ]	'good'

Polysyllabic form too are freely affected, a [Vg] or [gV] sequence being inserted into every syllable of the original form.

85.	<u>hoffi</u>	['hɔɔfi]	['hɔɔɔɔ'fɪɔɔɔ]	'to like'
	<u>meddwl</u>	['mɛðɔɔl]	['mɛɔɔɔɔ'ðɔɔɔl]	'to think'
	<u>dwad</u>	['duad]	['duɔɔɔɔ'agad]	'to come'

Glides and Diphthongs

Here again glides are consistently treated as consonants. When the original form of a word contains a falling diphthong, only the vocalic element is copied to give the Cleversticks version. The glide is left alone. Clearly the diphthong is functioning as a sequence formed of a vowel and a consonantal glide, not as a single complex vocalic unit.

86.	<u>fawr</u>	[vawr]	['vagawr]	'big'
	<u>troi</u>	[trɔɔj]	['trɔɔɔɔj]	'to turn'
	<u>ganwyd</u>	['ganɔɔjd]	['gaga'nɔɔɔɔjd]	'he/she was born'

Similarly, if a glide precedes a vowel, it is again only the vowel that is copied. The glide behaves like any other syllable-initial consonant.

87.	<u>chwith</u>	[χwi:θ]	['χwiɔɔɔθ]	'left'
	<u>gwely</u>	['gwɛli]	['gwɛɔɔɔ'liɔɔɔ]	'bed'

Rule Ordering

On the assumption that *Cleversticks*, like *Backslang*, is implemented by a phonological rule which distorts the original form of the word, the the question again arises of where in the derivation this rule applies. In this instance it appears that the *Cleversticks* rule follows some of the phonological rules which relate to word-internal processes, but precedes others.

Take for instance the rule of Final Vowel Lowering¹⁷, which in north-west Wales relates pairs such as the following.

88.	<u>rhesal</u>	['r.ɛsal]	'rack'
	<u>rheseli</u>	[r.ɛ'sɛli]	'racks'

An underlying mid-front vowel is lowered to [a] if it appears in the final syllable of a polysyllabic word; in any other context it survives unaffected into the output. It seems likely that the item ['blənað] must undergo this rule, corresponding as it does to ['bləneð] in other dialects, and its equivalent *Cleversticks* form allows us to determine the rule ordering involved.

89.	<u>blynadd</u>	['blənað]	['bləgə'nagað]	'year'
-----	----------------	-----------	----------------	--------

If Final Vowel Lowering applies first, then the *Cleversticks* rule, there are no problems.

90.		['bləneð]
	Final Vowel Lowering	['blənað]
	<i>Cleversticks</i>	['bləgə'nagað]

The reverse ordering would require an otherwise unnecessary reformulation of Final Vowel Lowering, to allow it to alter not just the last syllable but the last two syllables.

We have already established that the *Cleversticks* rule treats all glides as consonants. Clearly then Glide Formation must apply first, with Code Formation following on later in the derivation.

91.		[vaur]	[χui:θ]
	Glide Formation	[vawr]	[χwi:θ]
	<i>Cleversticks</i>	['vagawr]	['χwɪɪθ]

Some rules therefore must precede the implementation of *Cleversticks*. Other rules however must, just as clearly, follow it. One of these is Stress Assignment. Consider the following forms.

92.	<u>meddwl</u>	['mɛðɹ]	['mɛgɛ'ðɹgɹ]	'to think'
	<u>Talysarn</u>	['*talə'sarn]	['taga'ləgə'sagarn]	

In the Cleversticks form stress is marked with complete regularity on the penultimate syllable, and more lightly on alternating preceding syllables. This occurs regardless of what the stress pattern of the original form may have been, normal penultimate stress as in ['mɛðʊl], or exceptional word-final stress as in [*talə'saɹn]. If the Cleversticks rule applies first, then there is no problem.

93.		[mɛðʊl]	['*taləsɑɹn]
	Cleversticks	[mɛgɛðʊgʊl]	[tagaləgəsagɑɹn]
	Stress Assignment	['mɛgɛ'ðʊgʊl]	['taga'ləgə'sagɑɹn]

Cleversticks distorts the basic form to a state where irregular applications of Stress Assignment are blocked, and the rule therefore applies very straightforwardly, without reference to the derivational history of these forms. The reverse ordering would on the other hand create difficulties: with Stress Assignment applying first, each lexical item would receive stress only on one syllable, and there would be no motivated way to assign the appropriate pattern of stresses to the additional syllables generated by the Cleversticks rule.

In the same way those Word Structure Rules that specify predictable vowel length must follow the Cleversticks rule. Recall that in monosyllables vowel length is contrastive before a single sonorant.

94.	<u>hen</u>	[he:n]	'old'
	<u>del</u>	[dɛl]	'pretty'

In other monosyllables vowel length is predictable. Before a voiced stop, for instance, the vowel must be long; before a voiceless stop it must be short.

95.	<u>dod</u>	[do:d]	'to come'
	<u>sut</u>	[sɪt]	'how'

In the equivalent Cleversticks forms this pattern disappears completely. What we find are consistently short vowels. as would be normal in polysyllabic forms.

96.	['hɛgɛn]
	['dɛgɛl]
	['dɔgɔd]
	['sɪgɪt]

This can easily be explained if we assume that the Cleversticks rule applies first, with the Word Structure Rules subsequently giving the vowel length appropriate to polysyllabic forms.

97.		[hen]	[del]	[dod]	[sɪt]
	Cleversticks	['hegen]	['degel]	['dogod]	['sɪgɪt]
	Word Structure Rules	['hɛgɛn]	['dɛgɛl]	['dɔgɔd]	['sɪgɪt]

So far as rules relating to word-internal phonological processes are concerned then, the position is rather different from that established for Backslang. Backslang was shown to follow all such rules, but the Cleversticks rule is ordered in among them, and appears therefore to be placed rather earlier in the derivation.

Phonotactic Restrictions

The output of the Cleversticks rule disregards one of the phonotactic restrictions which normally holds of Welsh. The central vowel [ə] is usually restricted to nonfinal syllables where it is followed by at least one consonant. It does not normally appear in the last syllable of polysyllabic forms. There are however a few grammatical items where [ə] appears exceptionally as the vowel of a monosyllable. When the Cleversticks rule applies to these we find [ə], inevitably, in a word-final syllable.

98.	<u>yn</u>	[ən]	['əgən]	'in'
	y	[ə]	['əgə]	'the'

The exceptional Cleversticks forms are however parasitic as it were on exceptional basic forms. Only items which breach the normal restrictions in some way in their basic form do so in the Cleversticks version. The code itself does not take forms consistent with the normal phonotactic restrictions, and by its very operation render them abnormal.

Sandhi Forms

Turning now to those rules which determine the shape of the individual word in the wider context, we must establish how they interact with the Cleversticks rule. First then those rules which adjust the form of grammatical items.

We saw earlier that the definite article varies in form, appearing as [r] when it immediately follows a vowel, and otherwise as [ə] before a consonant, [ər] before a vowel. It was assumed that the full form [ər] is basic, with the other two forms being derived by rules which take account of the adjacent context.. The following Cleversticks examples are typical.

- 99a. wyth o'r gloch
 [ʊjθ o:r glo:χ]
 'eight o'clock';
- 99b. [ʊjθ ɔgɔr glɔgɔχ]
- 100a. dros y ffor'
 [drɔs ə fɔr]
 'over the road'
- 100b. ['drɔgɔs 'əgə 'fɔgɔr]

They can be accounted for very simply on the assumption that the Sandhi Rules apply first, and then Cleversticks.

101.		[o əɾ ɡlɔːχ]	[dɾɔs əɾ fɔɾ]
	Sandhi Rules	[o r ɡlɔːχ]	[dɾɔs ə fɔɾ]
	Cleversticks	['ɔɟɔɾ 'ɡlɔɟɔχ]	['dɾɔɟɔs 'əɟə 'fɔɟɔɾ]

Another grammatical item affected by a rule of this type is the continuous aspect marker [əŋ], which is reduced to [ŋ] when it immediately follows a vowel. Here too the Sandhi Rule may precede Cleversticks.

102a.	<u>Dach chi'n dwad.</u>
	[dax χi:n 'duad]
	'You are coming.'
102b.	['dagax 'χiɣin 'dugu'agad]

The derivation appears to run as follows.

103.		[dax χi əŋ duad]
	Sandhi Rule	[dax χi n duad]
	Cleversticks	['dagax 'χiɣin 'dugu'agad]

This ordering does not work every time however. In other cases it is necessary to assume that the Cleversticks rule applies first, blocking the later application of the Sandhi Rules. Consider the following.

104a.	<u>Dach chi'n troi.</u>
	[dax χi:n trɔj]
	'You are turning.'
104b.	['dagax 'χiɣi 'əɟəŋ 'trɔɟɔj]

Here we must assume a derivation such as that shown below. The Sandhi Rule is formulated so as to adjust the shape of a monosyllabic form [əŋ]. Once Cleversticks has given ['əɟəŋ], it is faced with an unexpected dissyllabic form and is therefore blocked.

105.		[dax χi əŋ trɔj]
	Cleversticks	['dagax 'χiɣi 'əɟəŋ 'trɔɟɔj]
	Sandhi Rules	-----

As with Backslang then, the Sandhi Rules may either precede or follow Cleversticks, leading to varied output forms.

Initial Mutations

The initial mutations however are a different matter. In almost every case the initial mutation which would be expected in the basic form shows up too in the Cleversticks equivalent. First the Soft Mutation.

- 106a. hogan ddel
[ˈhɔɡan ðɛɪ]
'a pretty girl'
106b. [ˈhɔɡɔˈɡagan ˈðɛɡɛɪ]

Here the adjective [dɛɪ] immediately follows a fem. sg. noun and is mutated to [ðɛɪ]; the mutation is also present in the Cleversticks version [ˈðɛɡɛɪ].

We find the same pattern of behaviour in other contexts. Sometimes the mutation is triggered by a specific lexical item, such as the preposition [am].

- 107a. am filltir
[am ˈvɪɪtɪr]
'for a mile'
107b. [ˈagam ˈvɪɡɪɪtɪɡɪr]

At other times the overall syntactic structure of the sentence is relevant, with the direct object of the inflected verb, for instance, undergoing mutation.

- 108a. Nes i godi.
[neʃ i ˈɡɔdi]
'I got up.'
108b. [ˈnegeʃ ˈɪɡi ˈɡɔɡɔˈdɪɡi]

In all such cases the mutation shows up both in the basic form and in the Cleversticks equivalent. We find, for instance, [ˈvɪɪtɪr] rather than the unmutated [ˈmɪɪtɪr] in (107), with [ˈvɪɡɪɪtɪɡɪr] in the Cleversticks form. And we find [ˈɡɔdi] rather than the unmutated [ˈkɔdi] in (108), with [ˈɡɔɡɔˈdɪɡi] in the Cleversticks form.

The Nasal Mutation too normally shows up in both the basic and the Cleversticks versions.

- 109a. fy nhad
[və nɦa:d]
'my father'
109b. [ˈvəɡə ˈnhagad]

Here the noun [tɦa:d] immediately follows the 1sg. possessive pronoun and is mutated to [nɦa:d]. This same mutation appears in the Cleversticks version [ˈnhagad]. Only a very few examples fail to undergo mutation, and in every one of these the relevant item is a placename.

- 110a. i Dalysarn
 [i *dalə'sarn]
 'to Talysarn'
 110b. ['ɪgi *'taga'ləgə'sagarn]

Here the place name [*talə'sarn] immediately follows the preposition [i:], and would be expected to undergo Soft Mutation as in (110a). What we find in the Cleversticks equivalent however is the original unmutated initial consonant. In the same way the Nasal Mutation may be missing.

- 111a. yng Nghwm Cynfal
 [əŋ *ŋhʊm 'kənvəl]
 'in Cwm Cynfal'
 111b. ['əgən *'kʊgʊm 'kəgən'vagəl]

The placename [*kʊm 'kənvəl] should here undergo the Nasal Mutation, following the preposition [əŋ], as in (111a), but in the Cleversticks version we once again find the original unmutated initial consonant.

There are two possible ways of handling these forms. One possibility is to argue that they provide further evidence of variable rule ordering. Where the Mutation Rules precede Cleversticks, as in (106)-(109), the expected mutation shows up in the output.

- | | | |
|------|-------------------|----------------------|
| 112. | | ['hɔgən dɛl] |
| | Initial Mutations | ['hɔgən ðɛl] |
| | Cleversticks | ['hɔgɔ'gagən 'ðɛgɛl] |

Where the reverse ordering occurs, the Mutation Rules are blocked.

- | | | |
|------|-------------------|---------------------------|
| 113. | | [i *talə'sarn] |
| | Cleversticks | ['ɪgi *'taga'ləgə'sagarn] |
| | Initial Mutations | ----- |

This account would be completely parallel to that already suggested for the Sandhi Rules affecting grammatical items.

Unfortunately there are problems with this account. There seems on the face of it no good reason why the Cleversticks rule should block the Initial Mutations. It does not remove the initial consonant of the affected word; this is still available for the mutation to alter as appropriate. And it seems quite plausible that it is the lexical item [i:] as a whole that triggers the mutation, its exact physical shape having little or no bearing on this process. Compare, for instance, the way two quite distinct variants of the definite article, [r] and [ə], may both trigger the Soft Mutation, though differing greatly in their physical shape.

114. i'r ferch
 [i: r vɛrɕ]
 'to the girl'

115. am y ferch
 [am ə vɛrɕ]
 'about the girl'

The lexical item [mɛrɕ] is mutated identically in both cases.

If the rule ordering shown in (113) does not adequately explain the lack of mutation in such forms, what can? One possible explanation relates to the fact that all such exceptions prove to be placenames. Do we have here merely a tendency to block mutations with placenames, regardless of the presence or absence of the Cleversticks rule? Further data from normal speech would be needed to establish if this is true or not, but it certainly represents a reasonable alternative line of approach.

There is therefore no clear evidence as to the relative ordering of the Cleversticks rule and the Initial Mutations. The mutations may apply first, as in (112), but they could equally well apply after Cleversticks as in (113). Both orderings are equally plausible. The symmetry between Initial Mutations and Sandhi Rules which we found in the case of Backslang is lost, and the position of Cleversticks in the derivation must remain for the moment less clearcut.

Morphological Structure

The morphological structure of a word seems totally irrelevant to the way it undergoes Cleversticks. The rule is not sensitive to morpheme boundaries, so that simple forms such as (116) and complex forms such as (117) behave alike.

- | | | | | |
|------|---------------|-----------|----------------|-------------------|
| 116. | <u>meddwl</u> | [ˈmɛðʊ] | [ˈmɛgɛˈðʊgʊ] | 'to think' |
| | <u>gwely</u> | [ˈgwɛli] | [ˈgwɛgɛˈlɪgi] | 'bed' |
| 117. | <u>hoffi</u> | [ˈhɔfi] | [ˈhɔgɔˈfɪgi] | 'to like' |
| | <u>ganwyd</u> | [ˈgɑnʊjd] | [ˈgɑgɑˈnʊgʊjd] | 'he/she was born' |

Even very long, morphologically complex placenames undergo the rule in exactly the same way.

- | | | | |
|------|-----------------------|------------------|----------------------------|
| 118. | <u>Trawsfynydd</u> | [*trawsˈvənɪð] | [ˈtrɑgɑwsˈvɛgəˈnɪgɪð] |
| | <u>Llanffestiniog</u> | [*ˈlɑnfɛstˈɪnɔg] | [ˈlɑgɑnˈfɛgɛstˈɪgɪnˈjɔgɔg] |

How Thoroughly is Cleversticks Applied?

The rule of Cleversticks is on the whole applied consistently to every grammatical word in the sentence, both to the main lexical items and the grammatical forms.

- 119a. Yr ydwyf i yn byw yn y stryd fawr.
[ər 'ədɔjv vi ən biw ən ə stri:d vawr]
'I live in the main street.'
119b. ['əgər 'əgəd'əgdɔjv 'viɡi 'əgən 'biɡiɪw 'əgən 'əgə
'strɪɡɪd 'vɑgawr]

Occasionally, and unsystematically, the minor grammatical items fail to undergo the rule.

- 120a. tua wyth o'r gloch yn y bore
['tia ɔjθ o:r glo:χ ən ə 'bɔrɛ]
'about eight o'clock in the morning'
120b. ['tigi'aga ɔjθ 'ɔɡɔr 'ɡlɔɡɔχ ən ə 'bɔɡɔ'rege]

Those who used this code were more relaxed and fluent in it than were the speakers of Backslang. They were able to talk quite quickly, and the overall impression was more natural, with a rhythm and intonation much closer to those of normal Welsh.

Footnotes

1. The description of Backslang is based on the following sources: Welsh Folk Museum sound archive tapes 7030, 7074, 7076, 7077, 7078, 7080, 7081, 7082, 7083; the BBC Radio Cymru programme **Ar Gof a Chadw** broadcast on 9/11/83, a copy of which is held in the Welsh Folk Museum sound archive as tape no. R1072; letters sent to the BBC after this programme was broadcast, copies of which are held in the Welsh Folk Museum archive as Ms. 3273/78-83. The phonological description is based on the taped examples only, while the background information takes account of both letters and tapes.

2. The Backslang rules may be formalised as follows:

$$\begin{array}{ccc} \# \text{ Co Vx A} \# & \text{-----}> & \# \text{ Vx A Co Vx} \# \\ & & | \\ & & [+ \text{ long}] \\ & & [+ \text{ stress}] \end{array}$$

(Co = any single consonant, cluster or zero

(Vx = any vowel

(A = any sequence or zero

3. For the traditional view, see for instance Jones (1984, pp 41, 52-53). For my alternative analysis, see Awbery (1984b, pp 94-101). This analysis has been further developed in Awbery (1986a, pp124-152), where I argue that the glides in fact become consonants only at a comparatively late stage, being derived from underlying vowels by the phonological rule of Glide Formation.
4. For a discussion of Raising, see Awbery (1986a, p 42). The non-Backslang forms quoted in this section, to illustrate the operation of the phonological rules, as for instance those in example (16), are taken from Fynes-Clinton (1913), as his study relates to the same general area, and examples of appropriate non-Backslang forms were not always present in the tape recordings.
5. For Diphthong Fronting, see Awbery (1986a, pp120, 124).
6. For Centralising, see Awbery (1986a, pp 42-43, 55-57).
7. For Antepenultimate Deletion, see Awbery (1986a, pp 93-95).
8. For Vowel Epenthesis, see Awbery (1986a, pp 39-40, 92-93). Note that ochr is the correct written form, ochor is intended merely to represent the spoken form.
9. For Glide Formation, see Awbery (1986a, pp133-134).
10. For Stress Assignment, see Awbery (1986a, p 41).

11. For restrictions on vowel length and Word Structure Rules, see Awbery (1986a, pp18-49).
12. For restrictions on the central vowel, see Awbery (1984b, pp 76-81). Note that in Pembrokeshire dialect long central vowels are found on occasion (Awbery, 1986a, pp 45-46). This is not however true of northern dialects.
13. For an outline discussion of initial mutations, see Awbery (1986b, pp 415-425).
14. For a discussion of these variant, context-determined forms, see Awbery (1986b, pp 425-431).
15. This description is based on the following sources: Welsh Folk Museum sound archive tapes 7075 and 7079; the BBC Radio Cymru programme referred to in fn. 1, and the associated letters, also referred to in fn. 1. Here again the phonological description is based on the taped material only, while the background information derives from both the tapes and letters.
16. The Cleversticks rule may therefore be formalised in two different ways:
 - (a) $\emptyset \quad \text{--->} \quad V\alpha g \ / \ \text{----} \ V\alpha$
 - (b) $\emptyset \quad \text{--->} \quad gV\alpha \ / \ V\alpha \ \text{----}$
17. For further information on the replacement of the mid-front vowel by an open vowel in final syllables in north-west Wales, see for instance Thomas (1984) and Awbery (1984b, pp 80-82). Here again the data for such simple forms as those in (88) comes from Fynes-Clinton (1913).

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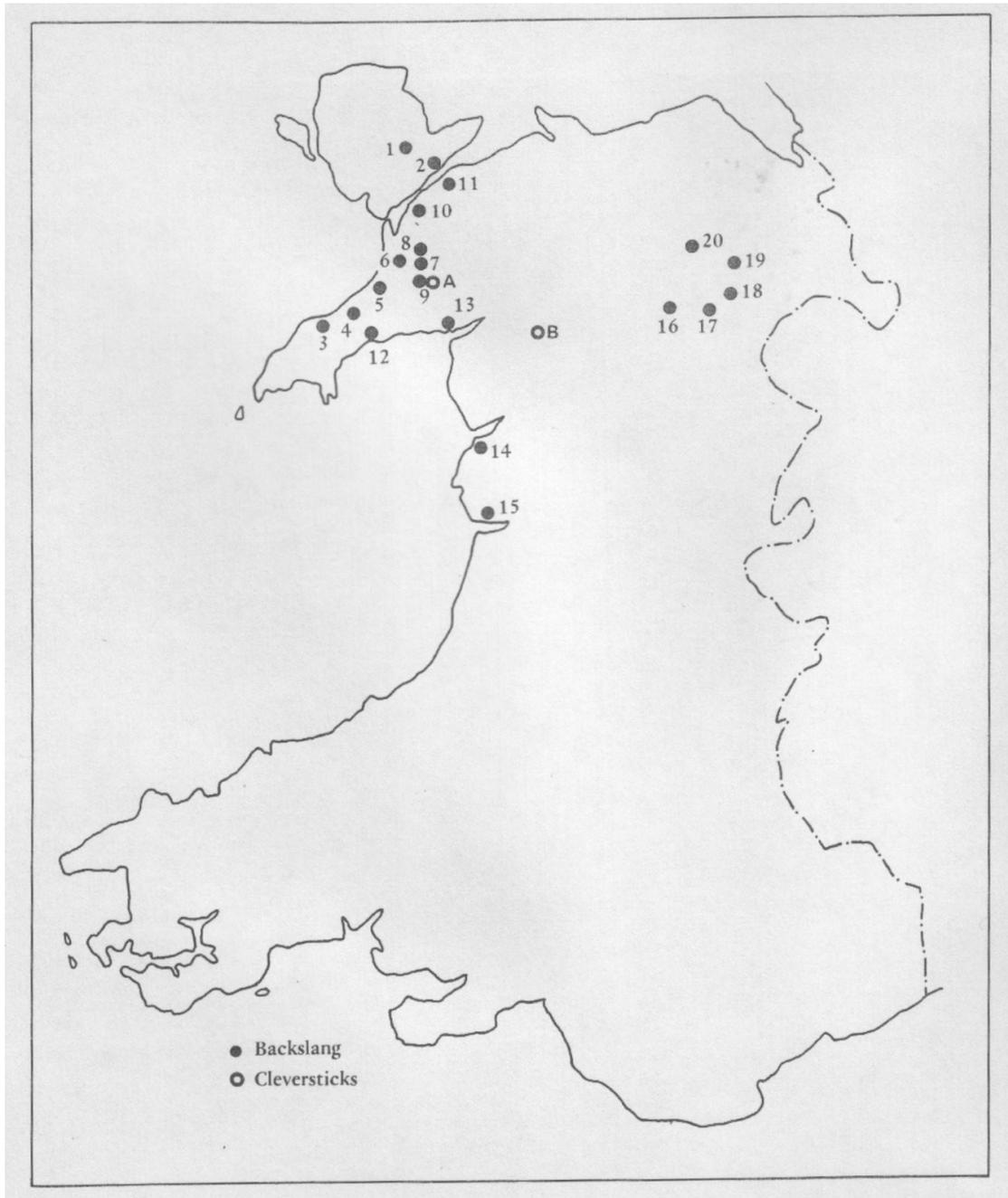
Key to Map

Backslang

1. Talwrn
2. Porthaethwy
3. Nefyn
4. Llithfaen
5. Clynnog Fawr
6. Y Groeslon
7. Carmel
8. Rhosgadfan
9. Talysarn
10. Caernarfon
11. Bangor
12. Pwllheli
13. Porthmadog
14. Arthog
15. Aberdyfi
16. Y Ddwryd
17. Carrog
18. Bryneglwys
19. Llandegla
20. Pentre Celyn

Cleversticks

- A. Talysarn
- B. Trawsfynydd



Map 1: Backslang and Cleversticks