# Australian and Austronesian Anaphora

## *An Archival Approach*

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## Abstract

This is a study of reflexivity in the Australian and Austronesian language families.

It consists of two sub-projects. The first sketches an overview of the reflexivisation strategies used in these two families. The second examines the possibility of a connection between verb-affixal reflexives and verb-affixal passives in the same families.

*Keywords:* Reflexive, anaphora, passive, Australian, Austronesian.

## Acknowledgements

It is said that no man is an island. This generalisation may or may not be true, but I for one am no counterexample to it.

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## Introduction

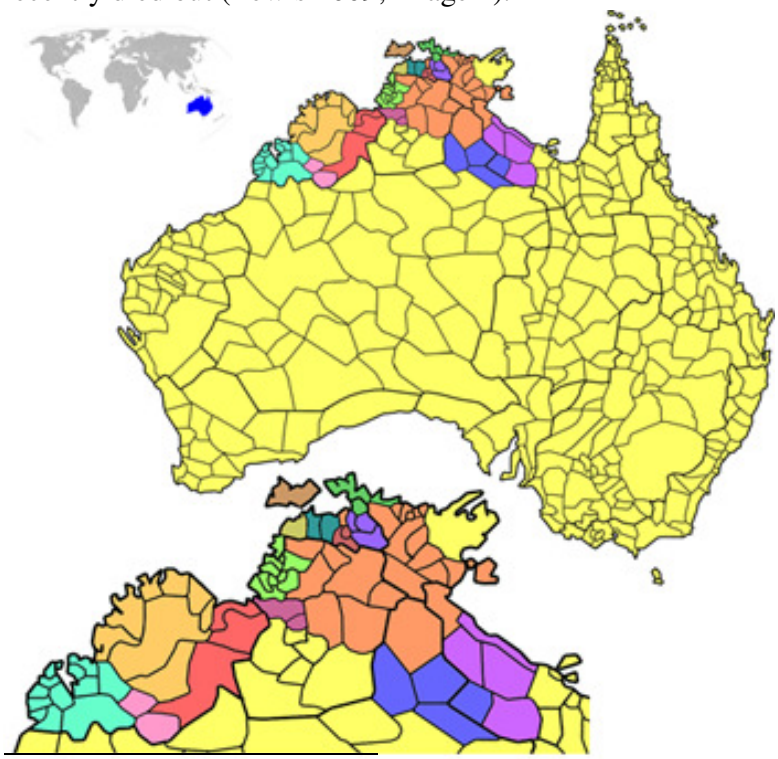
Anaphora is the phenomenon where an expression, usually a pronoun, refers back to someone or something that has been mentioned elsewhere. As with many subjects in linguistics, this seems straightforward enough, but is actually quite more complicated than meets the casual eye. It goes to show this that anaphora has been the subject of extensive discussion among generative linguists since the early sixties, and almost half a century of research later there is still more to say about it.

The primary mystery about anaphora is that it is not just allowed anywhere. There are very definite limitations to the usage of anaphora, and while these limitations are clearly systematic, it has proven to be a serious challenge to catalogue the patterns and to describe accurately as well as parsimoniously what rules they follow. Chapter 1 will discuss the complexities, and give recent views on how to handle them.

The main purpose of the present study is to contribute to the catalogue of patterns; to help chart the cross-linguistic variability of this phenomenon, so as to put the analyses to the test. We will specifically direct our attention towards one particular kind of anaphora, namely reflexivity. A technical definition of reflexivity will be given in chapter 1, but for now let us simply illustrate the phenomenon with an example. (1) is a reflexive sentence.

(1) Sylvia saw herself.[1]

The scope of this endeavour is further constrained in cross-linguistic range; it investigates two language families. The first is the Australian family, consisting of at least 264 indigenous languages that are spoken in Australia, or were spoken there before they recently died out (Lewis 2009; image 1).



[1] Underlining, italics and bold face will be used in examples to indicate elements that have the same interpretation.

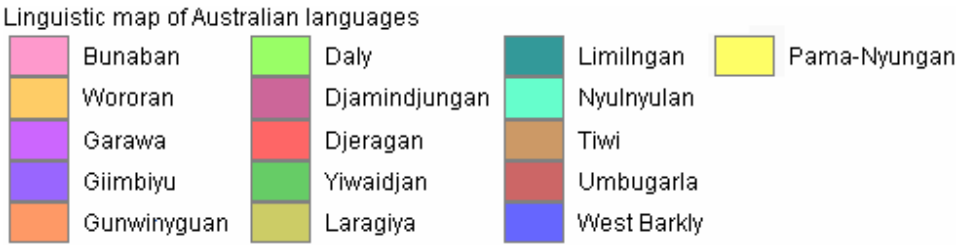
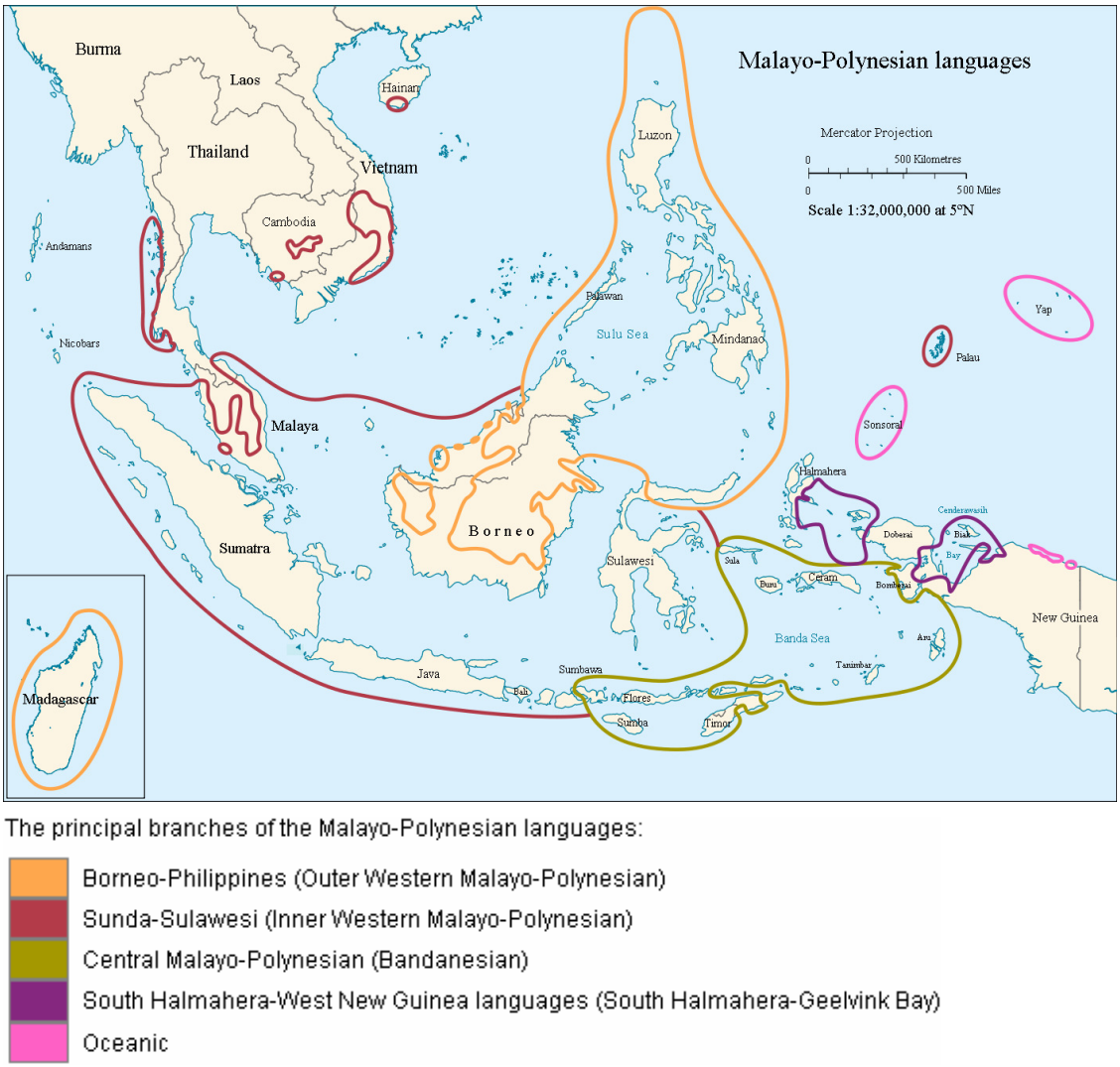



Image 1: The Australian language family[2]

The second is the Austronesian family, a geographically diverse family encompassing languages spoken on the islands of Southeast Asia and the Pacific Ocean, as well as on parts of the Southeast Asian mainland, and also on Madagascar (image 2). This family consists of at least 1257 languages (ibid.).




[2] Source: http://en.wikipedia.org/wiki/File:Australian_languages.png. This file is licensed under a Creative Commons Attribution-Share Alike 3.0 Unported license.

Image 2: The Austronesian language family[3]

This thesis has three chapters. The first chapter will give a general overview of the theoretical background against which the rest of the thesis is set. The latter two chapters constitute the thesis proper; they will each discuss one of two separate but related projects.

The second chapter concerns the main project of charting Australian and Austronesian reflexives. An overview will be given of what reflexivity strategies are used where, as well as what data were found that seem particularly remarkable, and to what extent everything fits the analyses.

The third chapter describes an additional project investigating the possibility that verb-affixal passives are grammatically related to verb-affixal reflexives, and that these will tend to co-occur. The investigation will build upon the data acquired in the second chapter, by combining these with data on the possible ways to realise passives in the same language families and looking for patterns.

## 1. Theoretical background

Anaphora is defined as a situation where an expression refers back to an argument that has been mentioned before, so that they have the same interpretation; in general, the later expression (the *anaphor*) is a simpler and less specific term than the earlier argument. Within the domain of the single sentence, anaphora takes the form of either binding or coreference.

This is an important distinction. In either case two arguments refer to the same individual or entity, but binding creates a relation where one element depends on the other for its interpretation, whereas in the case of coreference the two independently denote the same referent. The examples below are cases of simple coreference.

(2a) The morning star is the evening star.
(2b) Batman is the same person as Bruce Wayne.
(2c) You might expect the inventor of dynamite to have been someone who liked to blow things up, but Alfred Nobel was not a destructive person.

In the case of binding, on the other hand, the interpretation of the second element is directly controlled by that of the first, and it would be interpreted as referring to something else if the first element were replaced by an expression referring to something else. In (3a) and (3b) below, the same word *himself* can refer either to *Bastian* or to *Atreyu*, depending on which name is in the subject position.

(3a) Bastian recognised himself.
(3b) *Atreyu* recognised *himself*.

This can be represented semantically by means of the lambda operator, which determines the value of a variable. Thus a binding relation like in (3) is represented as a predicate with two variables bound by the same lambda operator, which in turn applies to the entity

[3] Source: http://en.wikipedia.org/wiki/File:Malayo-Polynesian.svg. This file is licensed under a Creative Commons Attribution-Share Alike 3.0 Unported license.

that binds them; a simplified notation of this is given in (3'). This means that (3a) and (3b) describe the same predicate of self-recognition, only with different subjects.

(3'a) Bastian λx [x recognised x]
(3'b) Atreyu λx [x recognised x]

By contrast, coreference involves variables bound by different operators.

(4a) Batman looks like Bruce Wayne.
(4b) Batman λx BruceWayne λy [x looks like y]

Binding and coreference are not equal; the grammar has a preference for binding. Reinhart formulated this principle and named it Rule I (Reinhart & Grodzinsky 1993).

(5) **Rule I:**
NP A cannot corefer with NP B if replacing A with C, C a variable bound by B, yields an indistinguishable interpretation.

In other words: if either binding or coreference can occur between two arguments, and the sentence will have the same interpretation either way, then coreference is not allowed; binding must be used. This derives from the general principle of *economy*. It is a largely acknowledged property of the grammar that when presented with several options to achieve the same goal, it uses the one that takes least effort, minimising spendings of time and effort. In this case, the path of least resistance is binding, so coreference will not be used.

The formal definition of reflexivity in particular has already been mentioned in passing above. A reflexive predicate is a predicate involving (at least) two arguments that are bound by the same lambda operator, like in (3'a).

It is important to note that while English uses binding to represent this meaning, not all reflexivity relies on binding, or on anaphora at all. Reflexivity is not in itself a specific kind of anaphora, but rather a semantic property of predicates that mainly relies on a specific kind of anaphora. There are several ways to encode reflexivity, of which binding is one. We will turn to this in a moment.

## 1.1 IDI

It is an observation that reflexive predicates generally need some or other way to indicate that they are reflexive; they need to be *reflexive-marked*. Reuland (2001; 2005; in press) posits this is the result of the human grammar's *Inability to Distinguish Indistinguishables*, a principle abbreviated as IDI. This principle states that reflexivity inherently introduces a semantic problem, and that reflexive-marking is necessary in order to solve it. Consider a Dutch [nld][4] reflexive sentence that is not reflexive-marked.

(6) *Mireille hoort zich.
Mirelle hears SE
Intended reading: Mireille hears herself.

[4] I will add the ISO language identification code of every language I refer to besides English. For macrolanguages, the codes for all languages it consists of will be given. These codes are taken from Ethnologue.

*Zich* in (6) is an anaphor used mainly in reflexives, but unlike the English anaphor *herself*, *zich* is a simplex anaphor, which means it does not mark reflexivity. English *herself* is a complex anaphor, which does reflexive-mark the predicate.

At the Logical Form level of representation, this would be represented as in (7).

(7) Mireille λx [x hears x]

This is the semantic notation for a predicate that simply has two identical arguments, as one might expect a reflexive to boil down to. This is also what the simplified notation of reflexives used above looked like. But this is not enough; there is something important missing from (7).

The reason why (6) is ungrammatical is that the grammar can't tell the two variables apart at LF. They are identical, both being *x*, and furthermore there is no linear ordering at this level of representation to help tell which is which. Thus they become indistinguishable to the grammar. This should in itself not necessarily be a problem, but when this happens, it also becomes impossible for the grammar to tell that there are two instantiations of x and not just one. At the same time, the transitive predicate *hear* still needs two arguments, leading to a valency mismatch. This is why the *Inability to Distinguish Indistinguishables* is a problem for reflexives that are not reflexive-marked.

There are two cross-linguistically common solutions to this problem. One is is to keep the two arguments distinguishable, to keep the grammar from seeing them as one. This is done by 'protecting' one of the arguments by making it the argument of a function. This is the strategy Dutch uses, just like English; at LF, a complex anaphor such as *zichzelf* would translate to SELF(x) applied to the internal argument. This is the proper way to handle (6).

(8a) Mireille hoort zichzelf.
Mireille hears herself
Mireille hears herself.

(8b) Mireille λx [x hears SELF(x)]

The two arguments remain distinguishable and thus they are kept from collapsing into one.

There are many languages that don't use a dedicated function like *self*, instead using body part functions like *his head* or *his bones*, but the principle they use is the same. In Ilocano, for example, the reflexive pronoun *bagína* is based on the word *bagi* meaning *body* (Rubino 1997).

(9a) Na-kíta=na ti bagí=na iti sarmíng
Perf-see=3sg ART body=3sg OBL mirror
He saw himself in the mirror.[5]

(9b) λx [x sees BODY(x)]

The other solution is to reflexivise the predicate simply by making the verb require one less argument, turning a transitive predicate into an intransitive, or a ditransitive into a

[5] Glosses have been copied from their respective sources, with the exception of Dutch and Latin examples. Hence there are no consistent glossing conventions for the examples displayed in this thesis

transitive. This way the collapsing of the two arguments into one will give the right result. Consider (10), an example from Diyari [dif], where a transitive verb needs only a subject when a reflexive morpheme is added to it (Austin 1981, page 152).

(10a) ŋatu yinana muduwa-yi
1sgA 2sgO scratch-PRES
I scratch you.

(10b) ŋani muduwa-tadi-yi
1sgS scratch-REFL-PRES
I scratch myself.

The logical representation of this approach in action would be as in (10b').

(10b') I λx [x self-scratch]

This operation is said to decrease the verbs *valency*, the number of arguments it requires. There are several operations that can change a verb's valency.

## 1.2 Valency operations

The argument requirements of a verb are not limited to just the number of arguments, but also specify the thematic roles, or *theta roles*, that the arguments will have. Theta roles specify the relation that the arguments of a predicate have towards each other; the initiator and undergoer of an action, the person who experiences a feeling, the giver and the receiver and the item given, the cause of an event and the person affected by it, et cetera.

Reinhart (2000; 2002) proposes a revision of the way we think of theta roles; instead of atomic entities, theta roles are clusters of two features, denoting causation (+/-c) and mental involvement (+/-m) respectively. Both of these features can be specified as plus or minus or be unspecified, leading to nine possible feature clusters. Every theta role can then be redefined as one of these clusters.

| | |
|---|---|
| [+c+m] | Agent |
| [+c-m] | Instrument |
| [-c+m] | Experiencer |
| [-c-m] | Theme / Patient |
| [+c] | Cause |
| [+m] | Sentient |
| [-m] | Subject matter / Locative source |
| [-c] | Goal / Benefactor |
| [ ] | Arbitrary |

Table 1: Possible theta feature configurations (simplified from Reinhart 2002)

Reinhart believes that verbs with *agent* or *cause* subjects are the basic verb types that are listed in the lexicon, from which other forms are derived by lexical valency operations. There are three such operations: *saturation*, *reduction* and *expansion*.

Saturation reduces the syntactic valency of the verb, without reducing its semantic valency. It does this by *saturating* (i.e. existentially closing) one argument, so that the sentence implies there is someone who fulfils this argument role but does not specify who it is. This is the operation that leads to passivity.

The operation is illustrated in (11); notice how in the passive (11b), there is only one syntactic argument, but in its semantic interpretation in (11b') there are still two arguments. (11b') can be paraphrased as "There is someone who interrogates Ludwig", which means roughly the same thing as (11b) does.

(11a) Olivia interrogates Ludwig.
(11b) Ludwig is being interrogated.
(11b') ∃x [x interrogates Ludwig]

Reduction reduces the syntactic and semantic valency of a predicate by bundling two theta roles together so that they can both be assigned to the same argument. There is a further distinction between internal and external reduction, depending on whether it's the internal or the external argument that it reduces. External reduction, where the external argument is reduced, leads to expletivisation. This is what derives (12b) from (12a).

(12a) The storm clouds worried Balthasar.
(12b) Balthasar worried.

Internal reduction on the other hand reduces the internal argument, leading to reflexivisation.

(13a) Rudolph shaved his face.
(13b) Rudolph shaved.
(13b') Rudolph λx [x shaved x]

Finally, expansion increases the valency of the predicate by adding an agentive [+c+m] argument, leading to lexical causativisation.

(14a) The dogs walked.
(14b) Rosalind walked the dogs.

Internal reduction as shown in (13) is of course the most interesting type in this context. Saturation will also become important in part 2.

Internal reduction shows that while valency decreasing can be done by means of a syntactic operation, as in the Diyari [dif] example (10) above, it can also happen in the lexicon. Predicates that can be lexically reflexive are verbs for which reflexivity is part of the lexical entry. Such verbs often need no syntactic reflexive marking, because they are already reflexive-marked before they enter the derivation. In example (13b), the thematic roles of the shaver and the shaved are bundled together in the lexicon and assigned together to *Rudolph*; the predicate is used intransitively, so that only one syntactic argument is needed.

In some languages, such as Dutch [nld], the process of lexical theta role bundling leaves behind a residual accusative case feature, which needs to be applied to something. In this situation, a simplex anaphor is needed; this is an expletive that absorbs residual case, without reflexive-marking the predicate. This contrasts with languages like English,

where lexical reflexivisation allows for sentences with no other arguments than a subject, as (13b) shows.

## 1.3 Conditions on binding

Languages that use valency operations to encode reflexivity are relatively easy to understand. Languages using reflexive pronouns are a lot more complicated; as said before, the primary mystery of anaphora is that it is not just allowed anywhere, and the conditions that determine whether it is possible or not in any given context are a challenge to explain in a consistent way.

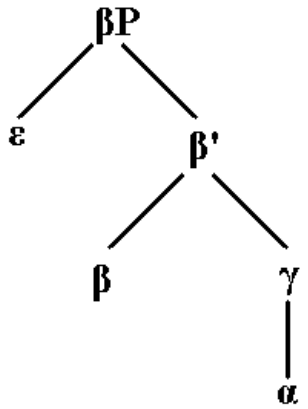
The main conditions on anaphora are the generalisations that have been summed up in the canonical Binding Theory (Chomsky 1981).

(15) Condition A: Anaphors must be bound in their governing category.
Condition B: Pronouns must be free in their governing category.
Condition C: Referential expressions must be free.

The "governing category" referred to in these generalisations is a local domain that is defined in complex syntactic terms.

(16) The governing category of α is the minimal phrase that contains α, the *governor* of α, and a subject that *c-commands* the governor.
(17) β c-commands α iff β is a sister to a node that *dominates* α.
(18) γ dominates α iff γ is an ancestor to α in the tree.
(19) β is the governor of α iff
1. β is the head of a phrase, and a *possible governor*
2. A phrase headed by β dominates α
3. There is no δ such that δ governs α and β governs δ
(20) β is a possible governor iff β is a lexical category (N, V, A or P) or the head of a finite clause.

(21)




In (21), β c-command α, while ε c-commands both β and α; βP, β' and γ dominate α, and if ε is a subject, then β governs α. The governing category for α is βP.

There is some variation between authors in the definition of government, but this need not concern us here, because we will not be using these definitions. What is important in the present context is the behaviours these conditions describe. The upshot of condition A is that anaphors must be bound locally; hence (22a) is grammatical, but (22b) is not.

(22a) Archibald knows himself.
(22b) *Archibald wonders whether Wilhemina will visit himself today.

The upshot of condition B is that for pronouns it's the other way around.

(23a) *Archibald knows him.
(23b) Archibald wonders whether Wilhelmina will visit him today.

The behaviour that condition C describes is that referential expressions – such as proper names or titles – can not be bound anywhere.

(24c) *He knows Archibald / the CEO of Weird Names'R'Us.

Later research has shown that the above generalisations do not hold in every language, revealing the situation to be more complicated (e.g. Reuland 2001). We will return to this in section 1.4.

The IDI principle and its consequences already cover some of the behaviour of reflexive pronouns; it explains why they are necessary in reflexive predicates. Several other notions are needed to explain why the generalisations from the canonical Binding Theory hold in English, as well as why they do not always do so elsewhere.

Condition A, the requirement that anaphors be locally bound, can be explained by the notion that a reflexive pronoun only reflexivises the predicate it's an argument of.

(25) Winston does not believe *O'Brien* can deceive *himself* / *himself.

*Himself* in (25) can be bound by *O'Brien* but not by *Winston*, simply because the former is in the embedded clause that *himself* is also in, and the latter is not. This predicate-centred point of view covers the locality requirement in a rather more simple way than an analysis relying on such concepts as governing categories.

Condition B is covered by another mechanism. An analysis of binding can save on assumptions by not postulating a separate, dedicated way to connects constituents[6], but that means interpretive dependencies can only rely on one of the independently required dependencies of movement or agreement. Since movement can only create dependencies between a constituent and either a copy of the same constituent or an empty place where the constituent used to be before it moved, agreement must be the more likely option.

Agreement happens through feature copying. In a simple example of subject-verb agreement such as the Latin phrase in (26), the subject presumably has the features "third person singular" by nature, but the verb initially doesn't have person and number features; the features of the subject are then copied to the verb, and so the verb gets the third personal singular form.

(26) Marcus ambulat.
Marcus-3.sg walk-3.sg
Marcus walks.

Local binding happens through a chain of several agreement relations, indirectly connecting the subject to the reflexive object. In such a chain, there must be exactly one

[6] Such as coindexation, which has been used by many analyses.

constituent with fully specified features, which is the head of the chain. This head then has its features copied to the constituents that are to be bound.

To illustrate, consider the Dutch [nld] sentence in (27).

(27) Neo kan zich verdedigen.
Neo can SE defend
Neo can defend himself.

In this sentence, there is a subject-verb agreement relation between the subject DP *Neo* and the tense node filled by *kan*; there must also be a relation of some sort between the V *verdedigen* and the tense system; and finally there is a structural case assignment relation between the V *verdedigen* and the direct object DP *zich*. Thus the subject is indirectly connected to the direct object it binds.

This is why a reflexive reading of a sentence such as (28) is ungrammatical.

(28) Neo kan *hem* / *hem verdedigen.
Neo can him defend
Neo can defend him/*himself.

In this sentence, *Neo* cannot bind *hem*. Chain-based binding relies on agreement, and agreement can only occur if one of the agreeing constituents is specified for the features in question and the other is not, so that the features of one can be copied to the other. In other words, it is a requirement of chains that they have only one head. In (28), both *Neo* and *hem* have fully specified phi-features, so a chain connecting them would be ill-formed.

*Neo* and *hem* cannot corefer either. Recall Rule I, repeated here as (29):

(29) **Rule I:**
NP A cannot corefer with NP B if replacing A with C, C a variable bound by B, yields an indistinguishable interpretation.

*Hem* could in principle be bound by *Neo*, if it were not for its fully specified features. This is enough for coreference to be ruled out by the economy considerations that underlie Rule I. The grammar first compares coreference to binding, finds that binding would be the best option, and blocks everything else. The fact that binding is in fact not possible in this case is not taken into account at the moment when the grammar defines the optimal option. Coreference may be the best *available* option, but availability does not factor into the optimality judgement process.

For a separate reference interpretation, on the other hand, neither the conditions on chain formation nor Rule I gets in the way. While a chain between *Neo* and *hem* would be ill-formed, if *hem* refers to someone other than *Neo*, the impossible chain is not required; furthermore, binding is not a competitor to separate reference, since it would lead to a different interpretation.

Finally, condition C, which states that referential expressions cannot be bound anywhere, is covered by principles that have already been discussed. Consider the examples below.

(30a) *He understands Archibald.

This sentence can be ruled out by the conditions on chain formation; since both *he* and *Archibald* have fully specified features, the local binding relation required for (30a) would involve a chain with two heads. However, this can not be the whole story; consider also (30b), which does not have this problem.

(30b) *He knows his audience loves Vic.

On the intended reading, *Vic* is bound non-locally by *he*. Since non-local binding does not rely on chains, the conditions on chain formation cannot be the reason why this sentence is ill-formed. There must therefore be another reason why binding of referential expressions is not allowed.

This other reason is Rule I. Notice that the proper names *Archibald* in (30a) and *Vic* in (30b) are intended to be bound by the pronouns in their subject positions. Binding is possible in these positions, as shown by their counterparts in (31), so that shouldn't be a problem; but the fact that binding is possible there also means that one could replace the proper names with a simpler element bound by the same binder and end up with an indistinguishable interpretation.

(31a) He understands himself.

(31b) He knows his audience loves him.

Thus the grammar, being economical, prefers the versions in (31) to those in (30), and the latter are blocked, simply because they're too much of a bother by comparison.

## 1.4 Anomalies

The observations of the canonical Binding Theory are now explained, but we are not done yet. There are observed behaviours of anaphora in different languages that defy the Binding Theory, and of course any analysis of anaphora needs to account for these as well.

There are languages where pronouns can be locally bound, in violation of condition B, such as Frisian [frr & fry] (Reuland 2001) and several Austronesian languages described in the present study. Section 2.3.2 will specifically elaborate on the Austronesian counterexamples.

In Frisian [frr & fry], the third person singular pronoun *him* is often used in the position of a simplex anaphor (Reuland, in press).

(32) Willem wasket him
Willem wash-3.sg him
Willem washes himself.

Dutch, a language closely related to Frisian, does not allow this.

(33) Willem wast zich / *hem* / *hem
Willem washes SE / him
Willem washes him / himself.

Like in English and Dutch, the pronominal direct object *him* in (32) has fully specified phi-features, so a chain connecting it to *Willem* would be ill-formed. However, there is independent evidence indicating that the Frisian direct object pronoun in (32) is not

assigned structural case by the verb (Hoekstra 1994), unlike its Dutch and English equivalents would be. This means that the final link in the chain, between the verb and the direct object, is missing; thus the subject cannot enter into an agreement relation with the object, and so economy does not rule out binding.

With this, every problem is not yet solved, however; *him* cannot reflexive-mark the predicate, so there's still the issue of IDI. This is why this construction is limited to lexically reflexive predicates. *Him* then fulfils almost exactly the same function as a simplex anaphor, absorbing residual case without reflexive-marking the predicate, except the case is inherent rather than structural.

There are also languages where anaphors can be bound non-locally, in defiance of condition A, such as Tukang Besi [khc & bhq], which allows the following (Donohue 1999 pp. 418; see also appendix 3).

(34) No-pa-balu-aku te baju ako te karama-no
3R-CAUS-buy-1SG.OBJ CORE shirt BEN CORE self-3POSS
She made me buy a shirt for herself / *myself.

Accounting for this observation requires the introduction of a different notion, namely a distinction between reflexive-marking that *licenses* a reflexive interpretation and reflexive marking that *enforces* it (Reuland, in press). In the English sentence in (25), repeated here as (35), reflexivity is enforced by the reflexive pronoun, but the Tukang Besi reflexive pronoun in (34) above only licenses reflexivity.

(35) Winston does not believe *O'Brien* can deceive *himself* / *himself.

Thus (34) is grammatical: the embedded clause is not reflexive, and the common denotation of the matrix subject and the embedded benefactive is simply a matter of coreference.

All of this being said, we now seem to have an analysis that can cover all the facts that had been brought to bear on it before the present study. With this in place, we can now move on to the main purpose of this thesis: to gather up more facts, and see how well the analysis can handle those.

## *2. Project 1: An overview of Australian and Austronesian reflexives*

This part will address the question what approaches to reflexivisation can be found in the languages of the Australian and Austronesian language families, and whether they fit the model of Reuland (2001; 2005; in press), discussed above. For both families a brief overview will be given and discussed.

### 2.1 Approach

The facts that will be discussed here are obtained from a large number of existing grammars, and not from work with informants. Although this approach has made the task feasible, it has also introduced a risk of bias in the sample of the languages used for this

project, since only languages for which grammars have been written and become available to me could be included, for obvious reasons.[7]

As a result one needs to be cautious when making generalisations based on the present data. With that said, the primary purpose of this project is to obtain information about individual languages, not to form conclusions about the entire families. This purpose is not hindered by limited data availability.

From the Australian family, 48 languages have been covered, out of a total of 264 languages on record. From the Austronesian family, 33 languages out of 1257 have been covered.

## 2.2 Results for the Australian language family

This section will give a summary of the findings in the Australian language family. For the complete and detailed data, see appendices 1 and 2.

This overview will not give references for every grammar from which data are discussed. These can instead be found with the relevant language in appendix 1.

### *2.2.1 Generalisations*

By far the most common strategy among the languages in this sample is the valency decreasing approach. At least 25 of these 48 languages (52%) indicate reflexivity in a way that decreases the predicate's valency, not counting inconclusive languages, some of which also seem to use this approach.

Of these 25, in at least 21 languages (43.75%) reflexivity is derived from normal transitives by means of one or several verb affixes that decrease the verb's valency. As an example of a language that uses this approach, recall Diyari [dif] mentioned in section 1.1, an Australian language where regular transitives can be turned into reflexive intransitives by adding the reflexive affix *-tadi-* to the stem.

(36a) ŋatu yinana muduwa-yi
1sgA 2sgO scratch-PRES
I scratch you.

(36b) ŋani muduwa-tadi-yi
1sgS scratch-REFL-PRES
I scratch myself.

Anaphora was the second most common approach. Some languages indicate reflexivity by means of dedicated reflexive pronouns, and some use reflexive morphemes that attach to pronouns. These strategies are found in at least 13 languages (27.08% of the sample).

An example of an Australian language that uses reflexive pronouns is Waluwara [wrb]. In this language, reflexives and reciprocals are formed by adding a suffix to a personal pronoun (Breen 1971, page 186).

(37) ŋatua watalaterijita[8]

[7] That is to say that, unlike Rule I, I am very much constrained by availability.
[8] This was copied manually from a rather blurry scan, so it's possible that some letters were copied incorrectly.

me-REFL scratch-PRES
I am scratching myself.

Waluwara personal pronouns can usually be omitted, but are obligatory in reflexives if they carry the reflexive morpheme.

### *2.2.2 Anomalies*

There is at least one language, namely Kuuk Thaayorre [thd], that allows both detransitivising verb affixes and reflexive pronouns to reflexivise the same predicate together, as well as letting either of them reflexivise a predicate alone. Example (38) below gives a Kuuk Thaayorre reflexive with only a reflexive verb affix, (39) gives one with only a reflexive pronoun, and (40) gives one with both (Gaby 2006, pages 410 and 224).

(38) Kuta ngith path<ath>-e-ø
dog(NOM) dem:dist bite<RDP>-RFL-NPST
That dog is biting himself.

(39) Ngay wash-m rirk-r ngathney
1sg(ERG) wash-TR DO-P.PFV 1sgRFL
I'm washing myself.

(40) Nhangknunt kar nhaath-e-ø
2sgRFL like look-RFL-IMP
You should look at yourself!

This situation seems paradoxical. If the verb affix strategy can reflexivise the predicate on its own, that presumably means it decreases the transitivity of the verb, so that the predicate needs only one argument at LF. If the pronominal strategy can reflexivise the predicate on its own, that presumably means the reflexive pronoun protects one argument in a function, so that the two arguments remain separate. If both of these then occur in one predicate, then there should be an intransitive predicate with two separate arguments. There should be one argument too many and the sentence should be ungrammatical.

A conceivable ad-hoc solution to this problem is that the reflexivising verb affix only optionally decreases the valency, making the argument structure ambiguous between transitive and intransitive (or ditransitive and transitive). This way, a reflexive could be grammatical whether there is a reflexive pronoun or not.

There is at least one language, namely Nyawaygi [nyt], that seemingly has no reflexive strategy at all. When asked to translate an English reflexive sentence, informants would use constructions with the antipassive suffix as in (41), or with regular transitives with a body part NP as the object, as in (42), or for a very limited class of verbs, with transitive verbs used intransitively, like in (43).

(41) ɲaŋga ɲa:giɲa yaguŋga
(no gloss available)
He's looking at himself in the water (i.e. looking at his reflection).

(42) ŋaga ŋaygu ɲigiɲ gunbalaɲa
1sg-A 1sg-GEN hand-ABS cut-PAST

I've cut my hand.

(43) ŋaygu ɲigiŋ wu:bayaɲa
1sg-GEN hand-ABS burn-PAST
My hand got burned (lit: I burnt my hand).

Interestingly, these approaches to translate reflexive predicates do all solve the problem of IDI; the antipassive suffix decreases the verb's valency, as does intransitive usage of transitive verbs, and using a body part as an argument simply satisfies the argument requirement of a normal transitive. As curious as this is, it's not a problem to the hypothesis.

A curiosity found at least in Warlpiri [wpb] is that reflexivity is encoded by a morpheme that takes away the need for an overt object argument, seemingly decreasing the verb's valency, but in spite of this, the subject of a reflexive has ergative case; if the reflexive verb were intransitive, we would expect the subject to be in absolutive case. Legate (2002) explains this as an indication that there is a covert anaphor in the object position.

There are languages that reflexivise a transitive predicate by decreasing the valency without any dedicated reflexive morpheme. Mawng [mph] derives reflexive predicates from transitive ones by simply replacing a transitive pronominal prefix by an intransitive one. This is curious, but not a problem to the present hypothesis. Detransitivisation without a dedicated reflexive morpheme still solves the problem of IDI.

In Ndjébbana [ddj], a reflexive-marked plural verb can be interpreted as reflexive and reciprocal at the same time. This too is interesting, but not problematic; there is in principle nothing to rule out the possibility that one predicate could be interpreted as both reflexive and reciprocal.

## 2.3 Results for the Austronesian language family

This section will give a summary of the findings in the Austronesian language family. For the complete and detailed data, see appendices 3 and 4.

Again, no grammars are referenced here. The specific sources of the information discussed here can be found in appendix 3, next to the languages they are about.

### *2.3.1 Generalisations*

Like the Australian language family seems to use the verb-affixal valency decreasing strategy more than anything else, the Austronesian language family uses reflexive pronouns much more than any other approach. Of the 33 languages investigated – and of the 25 language that yielded a definite answer – the pronominal strategy was found in 19 languages (57,57% and 76%). Of these 19 languages, at least 2 had an atomic reflexive pronoun consisting of one morpheme, and at least 16 had a composite reflexive pronoun consisting of several, such as a regular pronoun with an affix.

Of the same 19 languages, 6 used both the pronominal strategy and valency decreasing. Valency decreasing alone was found in only 2 languages.

A typical example of an Austronesian language using the pronominal approach to reflexivity is Bahasa Indonesia [ind]. Reflexives in Bahasa Indonesia are formed with the

atomic reflexive pronoun *diri* ‘self’, which can optionally be paired with a possessive (Kana 1986).

(44) Kami meng-hibur diri
we.excl. console self
We consoled ourselves.

(45) Kita meny-(s)alah-kan diri kita
we.incl. blame self our
We blamed ourselves.

### *2.3.2 Anomalies*

A noteworthy fact of this data set is that several of the examined languages don’t seem to need any special encoding for reflexivity at all; in these languages an object pronoun can simply have the same interpretation as the subject. Sentences where this is possible are often ambiguous between a reflexive reading and a simple transitive one where the object pronoun refers to someone else. This is curious in light of the present theory, which states reflexive predicates must be overtly reflexive-marked.

The issue is relatively easily explained, however, but on one non-trivial condition. Recall from section 1.2 that predicates can be lexically reflexive, which allows them to be reflexive with no need for additional reflexive-marking. Their theta-roles being lexically bundled, they are semantically intransitive by nature, even if they have two syntactic arguments. Therefore, on the condition that the unmarked reflexives are limited to lexically reflexive predicates, and there do exist reflexivisation strategies that are available for non-lexically reflexive predicates, there is no problem.

An additional remark to be noted here is that lexical reflexives are always agentive (Marelj 2004); although the technical reasons behind this observation remain an open question with no consensus on an answer, this is a generalisation that holds up across languages. This makes the testable predictions more specific and also somewhat more concrete, as it can be easier to tell whether a predicate is agentive than whether it’s lexically reflexive, without presupposing that the absence of overt reflexive-marking is a telltale of lexical reflexivity. At any rate, finding unmarked reflexives for non-agentive predicates would constitute a problem for the hypothesis.

The languages in question are Maori [mri], Lewo [lww], Gumawana [gvs], Kaliai [khl], Iai [iai], Big Nambas [nmb] and Buru [mhs]. There are no data on these languages that rule out this analysis, but how well the data fits it varies.

Maori [mri] allows for reflexive predicates just showing arguments with the same interpretation, but it also has two support forms; *anö*, meaning ‘again’ and *anake*, meaning ‘alone’ or ‘only’. These adverbs can serve to disambiguate predicates whose arguments could have a common interpretation, clarifying that this is indeed a reflexive. Another thing to note is that for certain predicates, the support forms are obligatory.

This is the extent of the available data on the matter, but if it may be postulated that only lexical reflexives can be unmarked and non-lexical reflexives are the ones that require a support form, these facts suit the hypothesis perfectly. The lexical reflexives need no reflexive marking, and any other predicate is reflexive-marked by a support form, for

example through valency decreasing. None of the given examples of unmarked reflexives are inconsistent with this postulation.

Lewo [lww] is similar. Reflexive predicates can be indicated by nothing more than common interpretation of the subject and object, but there is also a disambiguating support form, *si*, meaning 'again'. It is unknown whether this support form is ever obligatory, which is to say a little more needs to be postulated than for Maori, but by doing so it can nevertheless be made consistent with the hypothesis without saying anything very far-fetched.

In Buru [mhs], too, a predicate with an object pronoun in the same person and number as the subject is ambiguous between an unmarked reflexive or a simple transitive concerning two different people. There are three non-dedicated forms that disambiguate such predicates and presumably reflexive-mark them; the author refers to these forms as "post-verbal auxiliaries". If we postulate that the disambiguation is obligatory for non-lexical predicates, the problem is solved.

Gumawana [gvs] is somewhat different. In this language, unmarked reflexives are only allowed for *intentional* reflexive predicates; unintentional reflexives are marked by a reflexive pronoun. This is especially interesting in light of the observation that lexical reflexives are always agentive; any intentional action is necessarily agentive, while unintentional predicates may not be. This is in line with the predictions. The only predicates that can be reflexive with no reflexive-marking are agentive ones, which have the capacity of being lexically reflexive, which would exempt them from requiring reflexive-marking.

Whether every intentional reflexive is indeed lexically reflexive is another question. One of the given examples translates to *I burned myself on the fire (intentionally)*; this sentence was judged to be marginal, for being unfelicitous, since it's such a strange situation. For the same reason we wouldn't expect such a thing to be lexicalised, yet the sentence is marginal, and not entirely ill-formed. The fact that it is also not entirely grammatical seems to suggest that this is a productive process, rather than simply a matter of membership of a list of verbs that can be lexically reflexive; otherwise we would not expect any sort of grey area between grammatical and ungrammatical.

For Kaliai [khl], no reflexivisation strategy is known at all; the only reflexives I have knowledge of were a small set of non-reflexive-marked ones with common interpretations for subjects and objects. The given examples all seem to be idiomatic expressions, however, which is to say these are lexical reflexives. The hypothesis would predict there must be another strategy to reflexive-mark all non-lexical reflexives, which may have eluded the writer of this grammar. This is a large and bold postulation, but parsimony aside, there's no reason to expect it not to be borne out.

Big Nambas [nmb] is in much the same situation. This language has several pronouns that can be used as the object of a reflexive predicate, but also as that of a non-reflexive predicate, and there are also a number of pronominal verb affixes that can fulfil the same roles. All examples are agentive, which means these *could* be limited to lexical reflexives, but there is no known reflexive-marking strategy.

Iai [iai] is similar, too; there are reflexive predicates with direct object pronouns identical to those used in non-reflexive predicates. However, the author asserts that there is a covert reflexive pronoun that covertly reflexive-marks the predicate.

By way of a conclusion to these considerations: the hypothesis' prediction that any language that has unmarked reflexives will have an additional, proper reflexive-marking strategy is clearly borne out for four of the seven languages involved, and possible but not confirmed for the other three.

It should be mentioned that this is a bit of a "black swan" situation; the only way to be certain whether or not a language complies with the prediction is to find out that it does, but if a language doesn't comply we will have to remain uncertain about this, given the present resources. If there is a language that has no proper reflexive-marking strategy, the only way for us to know this for certain is to investigate the language thoroughly enough to be able to entirely rule out the possibility; although it would also mostly settle the issue if we were to find an unmarked reflexive predicate that we know not to be lexically reflexive. Having only the present data, however, our degree of acceptance of the hypothesis should compensate for this state of affairs.

With that said, the hypothetical prediction remains plausible.

There are two more anomalies to describe.

Samoan [smo] seems like an exceptionally complicated case. This language has three different ways of encoding reflexivity. For reflexives involving the entirety of the person – their whole body or person – there are certain non-ergative verbs, presumably dedicatedly reflexive. For reflexives involving only part of the person, such as a body part or one aspect of one's personality, a construction is used with an ergative predicate, the logical object in absolutive case, and the logical subject given as the possessor of the logical object, as well as presumably being the covert subject. Lastly, for reflexive causatives – that is to say, regular predicates that one causes oneself to do – "labile" causative verbs are used in non-ergative constructions; where "labile verbs" are defined as verbs that can be used either ergatively or non-ergatively, to express transitive and semi-transitive or intransitive predicates respectively.

All three of these are easy enough to explain, though. The first seems to be a lexical reflexive; they are intransitive verbs indicating transitive actions. The second looks like a reflexive pronoun strategy; the construction with the absolutive argument and the possessor would serve as a function enclosing the argument given here as the possessor. The third strategy uses verbs non-ergatively, which means they are intransitive in this usage, so that the problem is also solved.

The last anomaly is Tukang Besi [khc & bhq], which has already been discussed in section 1.4. To reiterate, it appears this language allows violations of what the classical Binding Theory called Condition A; reflexives, it seems, can be bound non-locally. Tukang Besi allows sentences such as (46) (Donohue 1999, pp. 419; see also appendix 3).

(46) Ku-pa-balu te mia hele te baju ako te karama-su
1.sg-CAUS-buy CORE person other CORE shirt BEN CORE

self-1.sg.POSS
I made the other person buy a shirt for myself.

In English, this sort of construction would be ill-formed; a non-reflexive pronoun would have to be used instead.

(47) I made her buy a shirt for me/*myself.

The problem in (47) comes from the fact that any reflexive-marked predicate is required to be semantically reflexive. In (47), *myself* reflexive-marks the predicate of the embedded clause *her buy a shirt for myself*, while this predicate does not have a reflexive meaning. In fact, there is no reflexive predicate involved in this sentence at all.

This problem arises in (47) because in English, reflexive pronouns enforce reflexivity. The Tukang Besi construction in (46) seems the very same thing, but there is no problem here. This is because the reflexive-marking element, *karama-su*, is not necessarily a reflexive-marker; it can also serve other functions, such as adding emphasis. It only licenses reflexivity, instead of enforcing it. This allows it to appear in a sentence without reflexive-marking anything. Thus there is no problem in this construction.

## 2.4 Conclusion

Among the languages that were investigated, there were many languages that were easy to explain within the present framework, and a few whose explanations were not immediately obvious. Some of the problems that turned up could nevertheless be solved in elegant ways, such as in Samoan [smo] and Tukang Besi [khc & bhq] above; others have weaker explanations, which require ad-hoc postulations in order to fit into the theory without leaving questions unanswered. Among these were Kuuk Thaayorre [thd], where valency decreasing and reflexive pronouns co-occur in one predicate, and Warlpiri [wpb], where reflexives seem intransitive but the subject is in ergative case. Of course, leaving some questions unanswered is also acceptable for the moment, but they will need to be resolved.

Somewhat more attention was given to several languages that appeared to allow predicates to be semantically reflexive without reflexive-marking, since they all share the same issue. Some of the solutions for these languages were rather elegant and plausible, while others required a bit of a stretch.

Nevertheless, overall, the majority of the acquired data turned out to be nicely compatible with the analysis, and while some of the few more tricky cases invoked some inelegance, none of them have proven to be inexplicable. Although certain issues ought to be addressed, it can not be said that there are substantial problems to the hypothesis in the present data.

# *3. Project 2: Verb-Affixal Reflexivisation and Passivisation*

In this chapter I discuss my secondary project, based on the knowledge gathered in part 1. This is an investigation of a possible connection between a verb-affixal reflexivisation strategy and a similar-seeming verb-affixal passivisation strategy.

## 3.1 Hypothesis

Like reflexivisation, passivisation is an operation on the argument structure of naturally transitive or ditransitive verbs. Like reflexivity, passivity can be encoded in several ways. English for example uses an auxiliary plus the promotion of the logical object to the subject position (as in (48)), whereas Latin formed passives with a verb affix (as in (49)), and Serbo-Croatian forms passives with a simplex anaphor (as in (50); from Marelj 2004). Other languages have no passives at all, such as Dyirbal or Ilocano.

(48a) Chell eats the cake.
(48b) The cake is eaten.

(49a) Fortēs fortuna adiuvat.
brave-Pl.ACC fortune-NOM assist-3.Sg.Pres
Fortune favours the brave.

(49b) Fortēs adiuvantur.
brave-Pl.NOM assist-3.Pl.Pres.Pass
The brave are favoured.

(50a) Oni grade kuću
They build.3.Pl.Pres house
They are building the house.

(50b) Kuća se gradi.
the house SE build.3.Sg.Pres
The house is being built.

If you recall Reinhart's analysis of valency changing operations from section 1.2, notice particularly that it analyses reflexivisation and passivisation as different kinds of valency operations; reflexivisation is reduction, whereas passivisation is saturation. The effect of both is that the predicate will need one less argument, but they achieve this in fundamentally different ways.

Nonetheless, this project set out to investigate the possibility that verb-affixal reflexivisation are related to verb-affixal valency decreasing passivisation, and more concretely that these approaches will systematically co-occur, in conscious contradiction to the analysis to be tested. The rationale behind this choice is that to test for the presence of phenomena that a hypothesis couldn't explain is no less important than to test for the presence of that which the hypothesis predicts. The merits of a hypothesis are after all determined primarily by how accurately it fits the facts – how well it can explain data that are found and rule out data that aren't found. Thus the present project set out to test the possibility that verb-affixal reflexivity and passivity are achieved through related operations.

The specific predictions to be tested by this project are the following: languages that use a valency-decreasing verb affix to encode reflexivity, like so many languages from the Australian family do, will also tend to effect passivity by means of a verbal affix that decreases the valency.

Conversely languages that do not indicate reflexivity by means of a valency decreasing verb affix will show no such preference for verb-affixal passives. This includes languages

that reflexivise a predicate by reducing its valency by any other means than a verbal affix, as well as languages that reflexivise a predicate without decreasing its (syntactic) valency. The proportion of these languages that still uses verb-affixal passives will be explicable by chance and common origin.

## 3.2 Approach

The approach for this project was essentially the same as that of the first part. The needed information was extracted from existing grammars.

The fact that both the reflexive pronoun strategy and the valency decreasing verb affix reflexivisation strategy are very widely represented, as noted in chapter 2, guarantees the data will not be one-sided in that respect. Furthermore the usage of two different language families should help to alleviate the bias of common origin, even if each family has shown a preference for one of the above two reflexivisation strategies.

Some additional precautions have been taken for objectivity. The purpose of these has been to create an approximation of a blind experiment of sorts: passivisation strategies were looked up while at the moment having no knowledge of the reflexivity strategy for the same particular language.

The sample for this project consisted of all the languages that had yielded a conclusive answer for the inventory of reflexives discussed in part 1. These were 32 languages. The grammars describing all of these were put together in a mixed folder, with no indication of which grammar belonged to which family. The passivisation strategy was then looked up and noted in a separate document. After every language had been dealt with, the passivisation notes were joined with the reflexivity notes and the results were compared.

These results were then entered into a modest database, and for each of the two groups – that of languages with a verb-affixal reflexivisation strategy, and that of languages without – the ratio of languages with verb-affixal passives to languages without was calculated.

## 3.3 Results

The groups were divided by reflexivisation strategy. There were 10 languages in this sample using valency-decreasing verb affixes, and 4 using valency-decreasing verb affixes as well as reflexive pronouns, yielding a test condition group of 14 languages using verb-affixal detransitivisation reflexives. Of these 14 languages, there are 5 that have no passive at all, which is to say there are 9 languages in this group to which the hypothesis' predictions apply.

Conversely there were 13 languages using only reflexive pronouns, and 5 languages using other means, yielding a control group of 18 languages with *no* verb-affixal detransitivisation reflexives. Of these 18 languages, there are 9 that have no passive at all, meaning the number of languages in this group to which the hypothesis' predictions apply is also 9. The two conditions were very favourably balanced in this regard.

The family distribution was not so balanced, however. Of the languages of the test group, only 2 were Austronesian, and 12 were Australian. The control group on the other hand contained 13 Austronesian languages and 5 Australian ones. This was to be expected,

given the distinct family preferences we saw in part 1, but it could be a liability. However, we will find that the results show this factor cannot have affected the outcome.

| | Test group | Control group | Total |
|---|---|---|---|
| Australian | 12 | 5 | 17 |
| Austronesian | 2 | 13 | 15 |
| Total | 14 | 18 | 32 |
| Total with passives | 9 | 9 | 18 |

Table 2: Group make-up

In the test group, there were 8 languages using verb-affixal passives, of which at least 7 use dedicated verb affixes. 1 language forms passives by means of a syntactic transformation. As mentioned, 5 languages have no passive at all.

In the control group, there were 7 languages that use verb-affixal passives, of which at least 3 use dedicated verb affixes, and at least 1 uses a non-dedicated verb affix. 1 language forms passives by means of a syntactic transformation. 1 language forms them by means of an adverb in combination with a certain impersonally used personal pronouns. As mentioned, 9 languages have no passives at all.

For the test group, the ratio of languages with a verb-affixal passive to languages without one was 0.5714; excluding the languages with no passives at all, this ratio was 0.8889 (8 out of 9)[9].

For the control group, the ratio of languages with verb-affixal passives to languages without one was 0.3889; excluding languages with no passives, the number was 0.7778 (7 out of 9).

| | Test group | Control group | Total |
|---|---|---|---|
| Verb-affixal passives | 8 | 7 | 15 |
| Syntactic transformation | 1 | 1 | 2 |
| Other | 0 | 1 | 1 |
| No passive | 5 | 9 | 14 |
| Total | 14 | 18 | 32 |
| Total excluding passive-less | 9 | 9 | 18 |
| Ratio | 0.5714 | 0.3889 | |
| Ratio excluding passive-less | 0.8889 | 0.7778 | |

Table 3: Results

[9] All of these numbers are rounded off to four decimals.

In other words, it turned out *both* groups had a very large proportion of verb-affixal passives. While it is strictly speaking true that the test group has more languages with verb-affixal passives than the control group, the difference is only *one* language – nowhere near a large enough difference to prove anything. It is a negligible difference, especially given the rather small sample.

## 3.4 Conclusion

It appears that Reinhart's (2000) predictions hold up, and that this investigation has failed to turn up data that defy her theory. The prediction that there would be a significant systematic difference has not been borne out by the data.

Of course the absence of a clear distinction is entirely due to the fact that an overwhelming majority of the languages uses a verb-affixal passivisation strategy; perhaps a replication with families that do not all rely so strongly on verb-affixal passives might obtain different results. Nevertheless, the experimental hypothesis predicted that the test group would not have any preference for verb-affixal passives, and that prediction has been very clearly disproved. Furthermore, the very existence of a language family such as Austronesian, which has a strong preference both for reflexives that don't use a verb-affixal strategy and for passives that do, constitutes a strong argument against this experimental hypothesis, and in favour of Reinhart's position that the two are independent.

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## Appendix 1: Reflexivity notes for Australian[10]

**Aranda** (dialect of [aer]) (Wilkins 1989):
p272: Reflexive suffix *-lhe*; detransitivises transitives (and transitivises ditransitives)
Refl suffix is also used for non-agentive predicates like "to break" (to break itself); middle voice?
When refl suffix is used with ditransitive, S can be agent and a location (like "I pulled the prickle out of myself"). Compared to middle voice because there can be an S and an O argument but no A argument.
Side note: there are some idioms involving refl suffix applied to verbs (e.g. "to lift up oneself" = "to boast")

**Alawa** [alh] (Sharpe 1972):
p81 (in Chapter 9: Auxiliary verb morphology)
Alawa marks reflexivity for singulars by means of reflexive pronoun affixes on the auxiliary stem. (Says Sharpe.)
Plural reflexives are marked by means of suffixes (on the main verb?) (p89). (Sharpe gives more attention to their morpho-phonological than to their syntactic properties.)

**Alyawarra** [aly] (Yallop 1977):
p57
"The suffix -ilha makes a transitive verb reflexive. (cf. Aranda reflexive forms with -l-, Strehlow pp.120-121). The reflexive stem thus formed functions as an intransitive verb and no reflexive object (...) is expressed (...)"
Reciprocals are formed with the suffix -irra, which has the same effect on the verb's valency.

However, -irra may also be used (non-obligatorily) with a non-reciprocal plural subject, even with transitive predicates. (I'm not sure how to tell the difference, but it's not ambiguous at least in certain cases.)
"There are also particular problems surrounding the notion of object, namely in connection with the object of reflexive and reciprocal verbs and with the distinction between direct and indirect object. There are no reflexive or reciprocal pronouns in Alyawarra (…) and the equivalents of ' I hit myself ' or 'the dogs are biting each other' are intransitive sentences (Chapter 7, sect ion 4; section 2, this chapter)."

This is not a problem for us. If the verb is detransitivised, it translates into V(x) at LF. IDI is not a problem to this.

**Anindilyakwa** [aoi] (Leeding 1989):
p374: "The Reflexive stem formative, -tjingwi follows a verb root. The resultant reflexive verb is intransitive, as identified by the verb prefixation."
So reflexives are an affix on the verb. (Incidentally, many things in this language seem to be an affix on the verb.)
p375: "The Reflexive morpheme can follow the Causative or the Transitivising suffix but the verb remains intransitive. This means that the reflexive suffix can de-transitive a verb, thus indicating that reflexiveness outranks transitivity."

[10] All notes are sorted alphabetically by SIL code.

p376: "There is an alternative way to express reflexivity when there is more than one person or thing involved. The non-singular suffix -aya follows the verb root or stem. It could be argued that the semantic concept is simply one of plurality in contrast to reflexivity expressed by -tjingwi."
p377: "The Reciprocal verb is not marked differently in the morphological structure from the Reflexive verb with a non-singular subject. The action of the verb involves a mutual relationship between a number of people, e.g., meet together, follow, or share."

Same story as Alyawarra. V(x) is easily accounted for.

**Arabana** [ard] (Hercus 1994):
p116: "the reflexive is expressed within the verb (5.3.3)."
There's an intensifier adjective 'manhi', translated as "self" but better understood as meaning "alone" or "unaided", which does not fulfill the role of a reflexive pronoun, according to Hercus. (Examples are given of its usage in non-reflexive sentences. I don't have the impression it's EVER used in a reflexive, in fact.)
p152 (5.3.3) is more relevant.
Reciprocal and reflexive are "closely connected"
Both formed with a detransitivising suffix. (Reflexive: *-nta*)
Reflexive is also used for reciprocal
Reciprocal can also be marked by suffix *-(k)a* followed by refl *-nta* (so if I understand correctly, there's an explicitly recip affix *-(k)a-* that can be left out).
Some verbs are lexically reciprocal, or have irregular stems just for the reciprocal.

**Awabakal** [awk] (Threlkeld 1892):
p45, p48: Reflexive is indicated by a pronoun. Refl pronouns have an intensifier particle *-bo*.
p53, p56: Apparently there's also a refl verb affix *éun*. (Hard to tell; no glosses.)
p49 calls this a "reflexive modification of the verb", and "active-intransitive".
So I'd say we have both familiar strategies again; valency reduction as well as V(xf(x)).[11]

**Bardi** [bcj] (Nicolas 1998):
p118: Dual verb affixes that "sandwich" the stem; *m-*[stem]*-inyji*. Together they mark reflexivity or reciprocality.
(Context must disambiguate between refl and recip.)
Quote (from a different author): The suffix can occur alone with the same refl/recip meaning; prefix only occurs with the suffix. Author's own observation: every predicate with only suffix is reciprocal.
p119: Similar situation in Yawuru ([ywr], another language in the Nyulnyulan branch), where one Hozokawa hypothesises that the prefix is "introspective" and the suffix is "reciprocal" in meaning.

Conclusion: compositionality in meaning is possible but inconclusive.
Like in Mawng [mph], there are transitive/intransitive affixes. Prefix triggers change of transitive to intransitive affix, and absence of ergative case. Suffix does not.
p122: There are other constructions translated as refl.

[11] By V(xf(x)), I refer to the reflexivisation strategy that protects one argument by means of a function, like the reflexive pronoun strategy in English.

Dative suffix *-jin* gives a refl reading at least to verb *joo* ("say") ("said to himself"). Not sure if limited to *joo*. Very frequent, but not equivalent to other refl.

3.sg dative when speaker is alone leads to coreference ("he[i] said to him[i]"). (Like Frysian?)

Can happen regardless of person agreement ("$I_i$ said to $her_i$")

There's also a usage of the 3.sg dative suffix used with plural subjects that gives a refl reading. (Also works for coordinated plural subjects.)

There's an adverb *ni-moolgooyarr* that translates as a dative refl ("to himself"). Can mean "alone; by themselves" (without help).

**ADDENDUM:** À propos of coreference in spite of person disagreement ("$I_i$ said to $her_i$"):

p123: "*2.6.4.1.4 The dative suffix does not agree with the subject in the "reflexive" form* Meanwhile, usage of the dative third person singular to refer back to the speaker, and creating a reflexive "effect", is also possible with first or second person subjects. In that case, the suffix does not agree in number [sic; should be person?] with the subject and remains third person singular. The singular form alone is then ambiguous and must be clarified by the context." [Note: quickly translated by yours truly; this document is in French.]

Example (82) includes the one-word-clause *ngan-joo-na-jin*, glossed as 1sg-JOO-P-3sgDAT (P meaning past tense), translated freely as "$I_i$ said to $myself_i$" ($je_i$ $me_i$ suis dit) and literally translated as "$I_i$ said to $her_i$" ($j_i$'ai dit à $elle_i$).

So, yes, if this author can be relied upon then we really do have a coreferential person disagreement here.

**Bunuba** [bck] (Nicolas 1998):

p293: Verb suffix; verb (allegedly) remains transitive, but object is always 3.sg.

One form for refl and recip. However, ergative case is usually associated with recips (although "the correlation is not perfect"), and refl object is usually dative.

Does that mean valency is decreased in a refl and the "object" is actually an adjunct?

*Addenda from other description in Handbook of Australian Languages, vol 5:*

p93: Attaches to a (lexically) "bivalent" root and makes it a "monovalent" stem; I'll interpret that as valency decreasing.

p106: I do get the impression that "monovalent" and "bivalent" are this author's adopted terms for 'intransitive' and 'transitive'.

p80/p83: they seems to be his terms for transitivity with pronominal prefixes.

(3 allomorphs for different classes of roots.)

p88: Valency is actually somewhat unclear; refl/recip verbs are "intermediate between the two [i.e. between "monovalent" ad "bivalent"], their prefixes having some of the features of each".

(That's not what he said earlier.)

Subject NPs, if they're there at all, are "sometimes ergative-marked and sometimes not." Ergative-marked subjects in examples are all reciprocal, not refl.

Author confirms that non-singular ergative-marked subjects tend to be reciprocal. (Usually.)

Independent pronoun subjects sometimes use the absolutive and sometimes the oblique-stem form. (Ergative marking is only available on absolutive stems.)

**Burarra** [bvr] (Green 1987):
p56: Apparently reflexivity can be encoded by detransitivisation alone (with an animate subject), like in Mawng [mph].
Not sure if that's the only way to encode it.
There's a verb affix *-ya* (allophone *-yi*) that's glossed as "REFL" (p32) and "INTR" (p55). Inconclusive.

**Dyirbal** [dbl] (Dixon 1972):
p89: Verbal affixes to transitives, some of which take away the last segments of the stem. (And some more irrelevant phonological intricacies.)
"A reflexive form functions like an intransitive stem (...)"
Reflexive form can also occur without reflexive meaning; it's then just an intransitivised verb. ('False reflexives'.)
Both true and false refl formation are fully productive.
Emphatic affix *dilu* disambiguates; forces reflexive meaning.
False reflexives convey potentiality rather than actuality. (Actual counterpart is expressed by "*-ngay* constructions".)
Sometimes the object of a reflexive becomes ergative rather than dative.
(Is this about true or false refls? Unclear.)

**Djaru** [ddj] (Tsunoda 1981):
p152: "'Reflexivisation/reciprocalisation' does not affect the transitivity of a sentence."
There's one morpheme (glossed as 'M' for "middle") for refl, recip and "extended reflexive". It attaches to a pronoun. (Which incidentally can attach to a verb again, like in Wakaya [wga].)
No reflexive readings available without reflexive morpheme. (As expected.)
An "extended" refl is apparently a refl used when an action carried out by "us" affects "me", or one carried out by "me" affects "us".
So, presumably, V(xf(x)) again. (Because the reflexive morpheme attaches to a pronoun.)

**Wangurri** (dialect of Dhangu [dhg]) (McLellan 1992):
p118: Refl seems to be identical to recip.
This grammar treats the refl too briefly to be very useful. At any rate, it seems to be another verb suffix. Let's assume it's the same as the rest.

**Diyari** [dif] (Austin 1981):
p152: Verb affix *-tadi-*. This morpheme derives reflexive meaning with transitive stems of one class and with ditransitives, and anti-passive or passive meaning with those of other classes, as well as a durative aspectual reading with reduplicated stems.
p75: Detransitivises the verb.
Refl can occur with body part noun object or without object.

Additionally there's an emphatic noun *munta* "self" that can be used to emphasise reflexitivity, but still only in combination with the *-tadi-* refl affix. *Munta* also occurs without refl affix, but then it's not a reflexive. (As in (347) "He ate it himself.")
Also works with ditransitives. (Of course.)

**Ndjébbana** [djj] (Handbook of Australian Languages, vol 5):
p290: Refl/recip/intransitiviser suffix *-yi-*.
Verb behaves like any intransitive verb wrt "the use of independent nominals and pronouns and (...) of adverbs and so on".
p263: "unclear" how productive this suffix is. (As an intransiviser or in general?)
Further proof of decreased valency: prefixes with a transitive and an intransitive form must show up in the intransitive form with this suffix.
p265/265: ambiguity for plural subjects; can mean "themselves" or "each other", OR BOTH at the same time.

**Djambarrpuyngu** [djr] (Wilkinson 1991):
p612: One suffix (*-mi-*) for refl, recip and "mutualis". It's glossed as 'R/R'.
It's a verb affix.
Also used for not strictly reflexive stuff, like doing stuff together (e.g. p618 (815), "crying together").
p613: "The only categorical role shift associated with the construction is the demotion of A to S with transitive and ditransitive verb stems." That means it intransitivises them, yes?
Reflexivity is also sometimes encoded without R/R, correlating with use of emphatic pronominal phrases. (Presumably by means of those.)
So in this lang, we have both the valency reduction strategy and the V(xf(x)) strategy.

**Djapu dialect of Yolngu** (Ethnologue says of **Dhuwal** [duj]) (Handbook of Australian Languages, vol 3):
p76: Refl/recip verb suffix *-mi*; affects transitivity (presumably by detransitivising it)
Can only be added to "augmented" stems. (I believe this means the verb needs a NOMINALISER suffix first.)
p117: "almost certainly derived from the PROPrietive suffix *-mirr*."
Proprietive is a case indicating the marked nominal belongs to some particular (aforementioned?) individual. I think it's a bit like genitive case, but on the owned instead of the owner.
Verbs with refl/recip affix can take objects; "I-NOM saw-REFL my reflection-ABS in the water" (p118 (217))
Some intransitive verbs can take the refl/recip suffix too; "crying together". Not possible with singular subject. (This usage is not really reciprocal. It means doing something together, not to each other.)

**Djabugay** [dyy] (Handbook of Australian Languages, vol 4):
p276: A reflexive pronoun that takes on the direct object role: *ngayany* "self".
Identical for all persons.
p300: Verb remains just a transitive verb, unmarked.

That's only for deliberate predicates. For accidental refls, verb gets affix *-yi-*, A is deleted and O remains. No reflexive pronoun is used.
p297: *-yi-* intransitivises the verb.
It's quite more versatile than just an accidental affix. It's also used for antipassives and for ongoing non-discrete actions or states. There's some room for ambiguity, but context helps resolve that.

**Garadjari** [gbd] (Sands 1989):
p56: Reflexive/reciprocal morphemes that attach to the verb. Different forms for object refl and dative refl. They "replace the object and dative markers respectively in a sentence."
So the refl morpheme takes the place of an argument. It's more like a refl pronoun than like the verb affix strategy we see in most languages. Valency doesn't seem decreased, it's just satisfied by the reflexive morpheme.
Is that V(xf(x))?
I suppose it might be. It's V(x[whatever the reflexive morpheme translates to]). Which could be f(x).

**Gaagudju** [gbu] (Harvey 1992):
gaagudju_harvey_s.pdf p231[12]: "The intransitivisers signal a variety of reductions from full transitivity (Hopper & Thompson 1980) - middle, passive, reciprocal, and reflexive meanings."
So reflexivisation decreases valency. Somehow.
gaadudju_harvey1992_s.pdf p452: "There are no alternative constructions to the detransitivisers for conveying reflexive and reciprocal meanings."
Well, whatever the form is, this is detransitivisation. That means there's no problem to the working hypothesis.

**Yukulta** [gcd] (Handbook of Australian Languages, vol 3):
Insufficient data for a complete understanding
Some refl verbs are derived from transitive verbs by substituting one allomorph of the verbaliser/indicative morpheme for another allomorph. (Only for verb roots ending in /a/.)

**Gooniyandi** [gni] (McGregor 1990):
p172: Oblique form of a subject pronoun is used to indicate doing something alone or by oneself; used for refls and recips, as well as for regular transitives and intransitives. (Without refl/recip verbal classifier. Not sure if this is really reflexivity or reciprocality proper.)
p557: Verbal classifiers *+ARNI2* and *+MARNI* have refl/recip meaning.
(*+ARNI2* is of the "extendible" and *+MARNI* of the "accomplishment" verbal modifier class.)
Verbal classifiers indicate the transitivity of the clause.
p318: refl/recip verbs are "1 valent"; they have one "inherent participant role". (Semantically speaking or argument-structurally speaking?)

[12] I've looked at two digital versions of the same book. Page numbers may not be reliable.

p324-326, Figure 5-3: refl/recip is seen as a separate "transitivity type", with one argument AG/GL. That seems like valency is 1 according to author.
The subject is still marked with Ergative case. (The Warlpiri problem?)
(The subject shows up as an independent pronoun, but also as a verb prefix. However, regular transitives have prefixes like that too. Probably just phi-feature agreement.)
Inconclusive.

**Gunwinggu** [gup] (Oates 1964):
p41: Refl/recip suffixes to the verb.
Not sure if these decrease the verb's valency. Inconclusive.

**Jingulu** [jig] (Pensalfini 1997):
p325: Refl/recip suffix *-nku* in the object agreement slot.
p326: "The difference between reciprocal and transitive readings is..." That means reciprocals are not transitive, yes? (Just an implication, but still.)
(22b): subject is nominative. (That doesn't tell us anything wrt the Warlpiri problem.)

**Guugu Yimidhirr** [kky] (Handbook of Australian Languages, vol 1):
p96: Several refl verb affixes; portmanteau morphemes of refl + past, nonpast or imperative; one paradigm for each of five conjugations (15 forms total).
p121: "acts like an intransitive stem derived from a transitive stem." So valency is decreased.
(Subject of refl is in absolutive case, too. No Warlpiri problem here.)
Accidental refls indicated by the subject being in accusative case. (Nominative case in the deliberate counterpart.)

**Mara** [mec] (Heath 1981):
p205: Reflexive verb suffix *-lana* added to transitives with an intransitive pronominal affix. A bit like Mawng [mph] plus an overt refl morpheme, I'd say.
One form for refl and recip.
Also used for agentless mediopassive.

**Mawng** [mph] (Singer 2006):
p126: "Reflexive forms of transitive verbs are derived by replacing the transitive pronominal prefix with an intransitive prefix."
It's the valency decreasing strategy again, but this time not by means of a dedicated reflexive morpheme, it seems. (Intriguing.)
p127: “The reflexive form is indistinguishable from the ordinary intransitive form of a labile verb root.”
The refl is clearly derived from the transitive form, not from the intransitive one. 1) The meaning of the verb suggests this. 2) Reflexivisation is fully productive, while intransitives are partially productive (limited to "labile" transitive verbs).
Refl can't derive from ditransitives in a fully productive way; there are only two ditransitives with transitive forms that loosely correspond in meaning ("show"/"appear to" and "promise to"/"choose"). [It seems unexplained how ditransitives are reflexivised; presumabley by means of dedicated always-reflexive verbs.]

p130: Recips are made with "a transitive verb and a contrastive pronoun linked to the verb by the conjunction *la*."
p283: Grammaticalised biclausal costruction; now monoclausal.

**Nyangumarta** [nna] (Sharp 2004):
p252: An affix to a "verbal pronoun", *-rninyi*. (Refl & recip in one form.)
"Verbal pronouns" are indeed pronoun-like affixes to the verb. In third person singular, there isn't any; in other persons and numbers there is.
Seems to derive from *rni* (1SG.SUB) + *nyi* (1SG.OBJ). ("I-me"?)
There's one form for direct and one for indirect objects. Only the former is a reflexive proper in the sense we're interested in. (The other is again more like "for himself" and stuff.)
Again it's the V(xf(x)) approach, I guess.

**Nyawaygi** [nyt] (Handbook of Australian Languages, vol 3):
p497: No straightforward dedicated reflexive.
Several ways used to translate English reflexives into Nyawaygi: with anti-passive suffix, with a regular transitive (e.g. "I cut my hand"), or (for a very limited number of verbs) by using transitive verbs intransitively.
**ADDENDUM:** À propos of the transitive verbs that allow intransitive usage with reflexive meaning:
p501: There are eleven verbs that can be used either transitively or intransitively.

| | "*basically intransitive* | *basically transitive* |
|---|---|---|
| [i] S = O | bana-Y and –L 'return' | muymba-L and –Y 'hide' |
| | | wu:ba-L amd –Y 'cook, burn' |
| [ii] S = A | baya-Ø and –L 'sing' | wu:nda-L and –Y 'eat' |
| | ba:ra-Y and –L 'search for' / 'find' | ngara-L and –Y 'hear, listen to' |
| | ga:lga-Ø and –L 'vomit' | mulnggari-L and –Ø(?), 'cut' |
| | bawiri-Ø and –L 'scratch' | ga:mba-L and –Y 'cover up'" |

(N.B. These transcriptions are approximations of the IPA symbols used in the original document.)
The example given of this sort of thing used for reflexivity is the following:

"(168) ngaygu nigin wu:bayana
1sg-GEN hand-ABS burn-PAST
My hand got burnt (lit: I burnt my hand)"

(The "literal" translation doesn't seem very literal at all, actually. A literal translation would be more like "my hand burned".)
I think it's debatable whether this is relevant to our interests. Is this really a reflexive reading?

**Pitta-Pitta** [pit] (Handbook of Australian Languages, vol 1):
p206: Verb affix for refl and recip: *-mali*
Valency is unclear.

**Panyjima** [pnw] (Handbook of Australian Languages, vol 4):
A pronominal enclitic on the verb, *-pula*.

(Very terse description.)

Presumably the pronominal strategy, then.

Possible etymology: identical in form to a suffix meaning "both".

There's also a general dual suffix, but this one emphasises a shared property.

Cognate with 3rd person dual pronoun enclitic in other Western Australian languages.

**Kuuk Thaayorre** [thd] (Gaby 2006):

p88: There are reflexive pronouns.

"The reflexive pronominal forms are formally very close to compounds of the corresponding possessive pronouns and nominative cardinal pronouns."

p410: There is ALSO a reflexivising morpheme '-e', which can apparently be suffixed to verbs as well as to nouns. This morpheme is "highly polysemous"; has many meanings.

p224: Apparently there's a "pronominal reflexive construction" in this language with a refl pronoun but no refl verb affix, there's a "verbal reflexive construction" with a refl verb affix but no refl pronoun, and there's a construction with both.

"(...) clauses expressing oblique reflexivity (i.e. where some oblique role - such as Beneficiary, Location, Source, etc. - is ascribed to the subject participant in addition to the Actor role) are not marked by the reflexive verbal suffix (since the subject participant is not an Undergoer), but are almost always marked by the reflexive pronoun."

So whether there's a refl verb affix depends on the theta-roles/semantics.

Well, the pronominal construction is straightforward enough, I'd say. Just V(xf(x)) again.

But does the verbal construction decrease valency? (After all, it can be combined with a refl pronoun, so there's a place for an argument...)

p504-505: "Although this conjugation class is primarily associated with intransitive verbs, the verbal reflexive construction is somewhat ambivalent with respect to transitivity. Oftentimes, as in example (653) above, the subject of the verbal reflexive clause is in unmarked Nominative case, signalling that the clause is intransitive. Other verbal reflexive clauses, however, contain an Ergative-marked subject. This is particularly common where the subject is acting upon a part of themself, where this part is encoded as an accusative direct object. Such clauses (e.g. 856) appear to be straightforwardly transitive"

Reminiscent of Warlpiri [wpb] but apparently more straightforward.

Well, that's it, then. The refl verb affix either decreases the valency by one, or the valency remains the same and is satisfied by a body part nominal or somesuch.

**ADDENDUM:** À propos of “cardinal pronouns”:

p86: It seems that “cardinal pronouns” are just regular pronouns; that is, pronouns like “I” and “you”, as opposed to possessive pronouns, reflexive pronouns, et cetera.

They certainly aren’t defined as morphologically free pronouns:

“Nominative and accusative (and, marginally, dative) cardinal pronouns possess alternative enclitic forms that attach to a variety of word classes, usually the verb.”

They’re glossed and translated like regular pronouns too.

So then the presumable etymology of the reflexive pronouns is along the lines of “my-I”.

**Tiwi** [tiw] (Lee 1987; Osborne 1974):

Osborne p56: A reflexive affix on a pronoun.

Lee p111: On an empathic pronoun, to be precise.

"These suffixes may also occur on verbs (...) and on the adverb, **wangata** *alone*."
In traditional Tiwi, Verb affixation seems more common for regular reflexives; much like the other languages where refls are formed by a detransitivising affix on the verb. The pronoun affixation thing is more like "by myself" or "for myself". Not relevant to our interests.
"The semantic notions covered by these suffixes are wider than just 'reflexive' and 'reciprocal'"
In modern Tiwi, the refl pronoun strategy is used. (Perhaps not exclusively. Unknown.)

**Uradhi** [urf] (Handbook of Australian Languages, vol 3):
Verb suffix *-:ni* that changes transitive verbs into intransitives.
Subject of transitive is Ergative, but of refl is absolutive. (No Warlpiri problem.)
Additionally there are refl pronouns.

Etymology: Take nominative pronoun (acc for 1sg), add *-ma*, reduplicate whole. Thus *ulu* "he" becomes *uluma-uluma* "himself".
It's possible for the verb to be refl-marked and the subject to be absolutive, but still to have a refl pronoun in the object position.
Because they don't "count" as arguments, these refl "pronouns" are considered participles rather than pronouns.

**Martuthunira** [vma] (Dench 1994):
p139: Some verbs have forms with an affix and without one, and the form without is inherently reflexive.
There's also a "reflexive nominal" *jankul* (glossed as 'self').
Other than that, inconclusive.

**Mbabaram** [vmb] (Handbook of Australian Languages, vol 4):
MIGHT have refl pronouns. Two candidate pronominals obtained, each attested just once; "[nim@] which may be a reflexive 2 singular form, and [Jim], which might possibly be a reflexive or intensive version of 1 singular". (SAMPA transcriptions are my approximations of the proper IPA. Don't rely on them.)
Inconclusive.

**Warlpiri** [wbp] (Legate 2002; Nash1980):
p54: Here it's an affix 'nyanu' to a pronoun-like "clitic cluster". (It goes into the position where object agreement morphology would go otherwise.)
However! Not detransitivising (according to Hale 1983) because the subject of a refl is in the ergative case. If it were really intransitive, it would be in the absolutive case.

Curious. But the relevant issue for us is: is the valency reduced by one argument?

This author believes it isn't. She writes there's a covert anaphor there. (This is not a grammar; the author is trying to defend a hypothesis. Best to take her partiality into account and just evaluate the relevant arguments on their own merits.)

Two additional arguments for this are that 2) there can be a body part adjunct related to the object like in "he hit himself on the head" (but can't that be related to the subject too? It's the same person after all) and 3) there may be a secondary predicate

relating to the object (same remark; what do you mean, related to the object? Why not to the overtly present subject?).
So I'm not completely convinced there's a null anaphor involved. The ergative case matter is curious, but null stuff is very inelegant. That sort of explanation should be a last resort.
I think that in this "clitic cluster", this refl morpheme always attaches to a pronoun-like or DP-like morpheme. In that sense it would be like the Wakaya sort of language. It would be the V(xf(x)) strategy again.

(Then why would Legate invoke covert pronouns to explain it?)

*Addenda from paper grammar (Simpson 1983):*
p182: Refl/recips are "represented in the AUX by a pronominal clitic (...) which can cross-reference an ABSOLUTIVE Object (...) or a DATIVE Object or an Adjunct Dative". It seems more like an argument in itself.
Also used in benefactive sense ("for himself").
Not marked for number; can be used with singular and non-singular subjects alike.
p185: 1.sg subjects can (only) be reflexive without this refl morpheme; refl is then expressed with 1st person object pronoun affixed to AUX. (Like Frysian?)

Same strategy used with 2.sg in imperatives; 2.pl is expressed normally, with -*nyanu*.

A "null pronominal" can be used for 3.sg subjects in non-finite clauses.
p185: "Reflexive verbs are transitive." (Because the subject is ergative. Author also mentions the object-licenses-complementiser-clause argument like Legate; compares to French, where complement clauses are disallowed when (because) the predicate is intransitive.)
Refl morpheme cannot co-occur with overt objects. It *can* co-occur with overt datives. (Well, that's to be expected, for any analysis. Datives are adjuncts, objects are arguments.)
My preferred analysis: either *nyanu* is a refl pronoun, or Legate was on to something and there's a covert pronoun in there.

**Watjarri** [wbv] (Handbook of Australian Languages, vol 2):
p234: Refl/recip verb suffix *-tju*.
Valency is unclear. (Very brief mention.)

**Wakaya** [wga] (Breen 1974):
Also uses pronominal reflexivisation.
Pronouns can be verb affixes or stand-alone pronouns, it seems. (Not sure if those are the same morphemes.)
Refl affix goes on "any subject and/or object pronoun or forms an extra constituent of the sentence if neither the subject nor the object is represented by a pronoun."
The author notes that there are no reflexivising verb affixes. Even if these are affixes to pronouns which are verb affixes (and thus still connected to the verb).

**Wangkangurru** [wgg] (Hercus 1994):
(Reflexive is (all but?) identical to Arabana; reciprocal is not.)
p152: Reciprocal and reflexive are "closely connected"

Both formed with a detransitivising suffix. (Reflexive: *-nta*)
Reciprocal requires a composite suffix including the refl suffix: *-la-mintya-nta* [benefactive-each_other-refl]. (Where -nta can also be a "speed" marker.)
Some verbs are lexically reciprocal, or have irregular stems just for the reciprocal.

**Waluwara** [wrb] (Breen 1971):
p175: This language reflexivises by means of a suffix to a pronoun.
Argument dropping seems to be possible in Waluwara, but there *must* be an overt reflexive pronoun in a reflexive sentence.
This seems much like English' "self" strategy. Turning V(xx) into V(xf(x)).

**Wardaman** [wrr] (Merlan 1994):
p189: Refl/recip verb suffix *-yi-*. (Glossed as RR.)
p182: Goes on the aux if there is any.
Prevalent in idiomatic expressions for certain actions such as fighting ("hitting" each other") or arguing ("calling each other").
Body-part nouns in object position sometimes occur in reflexive predicates. (In absolutive case.)
p108: "Reflexive and reciprocal constructions, as is true for other kinds of nominals, require that their subjects be expressed by Absolutive forms of the independent pronouns."
So valency is decreased to intransitive and we have no Warlpiri problem.
Etymological note: medio-passive verb marker is homophonous with refl/recip morpheme, and allegedly "evidently (...) historically (...) related to the reflexive-reciprocal marker". (p175)

**Warray** [wrz] (Harvey 1990):
p165: Again, a verbal affix that detransitivises the verb.
(Interestingly and I think correctly, this author points to a distinction between intransitivising (rendering intransitive) and detransitivising (presumably decreasing valency by one).)
With pro-drop.

**Ngiyambaa** (dialect of [wyb]) (Donaldson 1980):
p166: verb affix *-DHili-y* that renders the verb intransitive.
Different affix for the reciprocal this time.

**Yidiny** [yii] (Dixon 1977):
p280: Reflexivity is marked by verbal suffix *-:di-n:* and usage of just one argument (so in other words, just another detransitivising verb affix).
This reflexive necessarily indicates deliberate action. Accidental refls must involve an inanimate subject "doing" it, or some such. (The difference is subtle yet explicit.)
There are also two "self" particles, *ganagayuy* and *ganamarbu*, to disambiguate refl from homophonous antipassives with dropped dative arguments. (4.10, p374)
(Author says:) Apparently both related to affix "gana". *Marbu* on itself means "one's own", used for abstract inalienable possession. *Gayuy* does not occur on its own.

Both are used for reflexive and intensive functions. For reflexive function, used together with refl affix.
The affix *-di* is said also to have "[a] reflexive meaning" (in addition to a general intensifier meaning), though none of the examples given actually involves any reflexive predicate. The closest thing given is "I myself am sick", but that's not really a Refl. (I think the author misinterpreted the data.)
Recips are not marked by an affix here. The verb "to hit" can be reduplicated to mean "hitting each other"; other than that, it's usually described as "one painted the other, and then the other painted the first one in turn." (So, arguably there's no real reciprocal in Yidiny.)

**Margany** [zmc] **/ Gunya** [gyy] (Handbook of Australian Languages, vol 2):
p339: Refls "are derived by intransitivisation of a transitive by means of the suffix *-li* with deletion of any ergative marking from the subject and deletion of the object to the extent that it is identical with (rather than part of) the subject."
The valency decreasing strategy. (Author does not mention what happens to reflexivised ditransitives, but I assume they become transitive.)

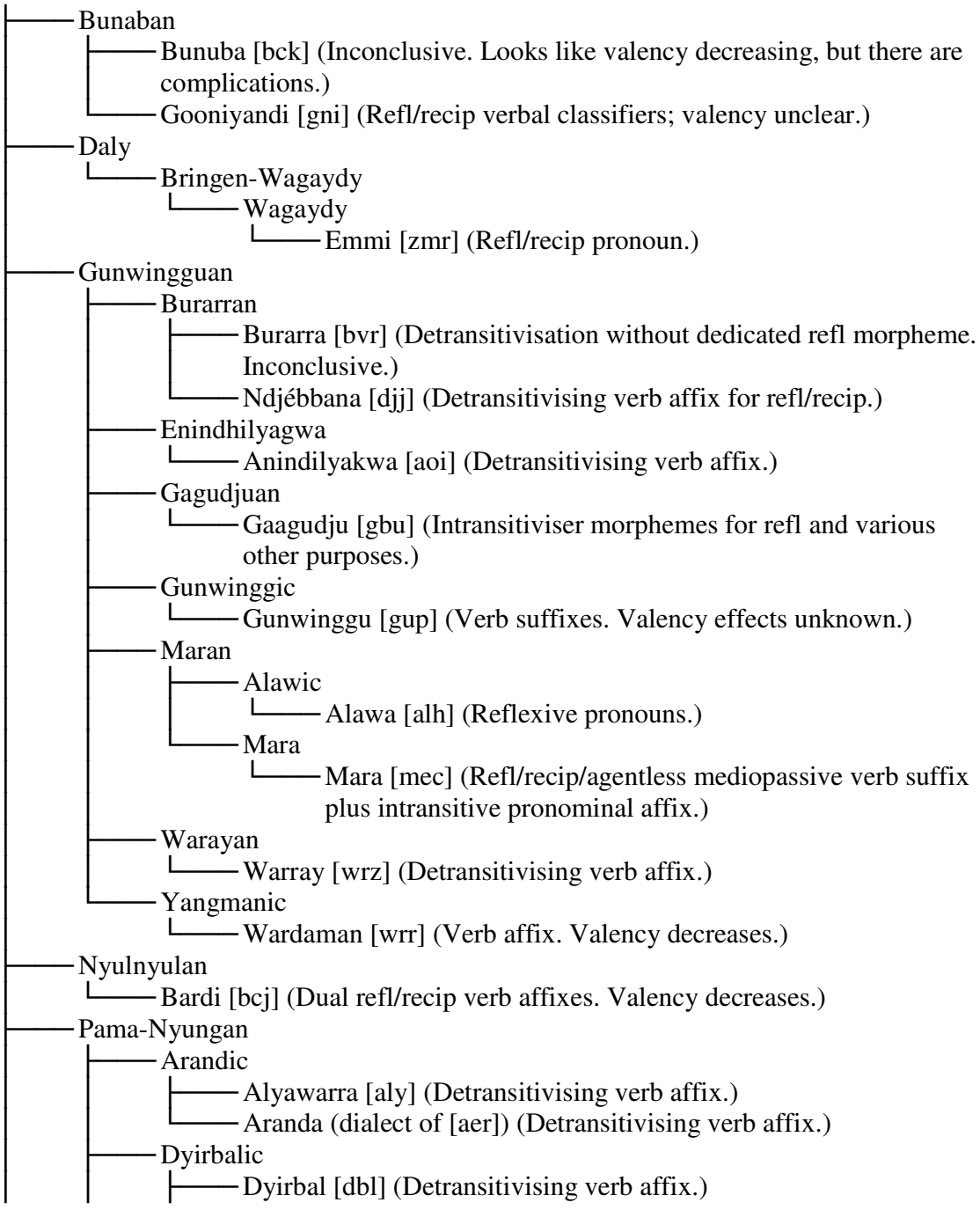
**Emmi** [zmr] (Ford 1998):
p259: refl/recip pronominal affix. Can be incorporated into the verb (like any pronoun, I presume.)
Another extremely terse description.
p32: "reflexive (...) arguments on the verb." So it's like Garadjari [gbd].

**Mpakwithi dialect of Anguthimri** [???] (Handbook of Australian Languages, vol 2):
p177: Reflexive suffix *-ti* that turns transitives into intransitives.
(No other mention found.)

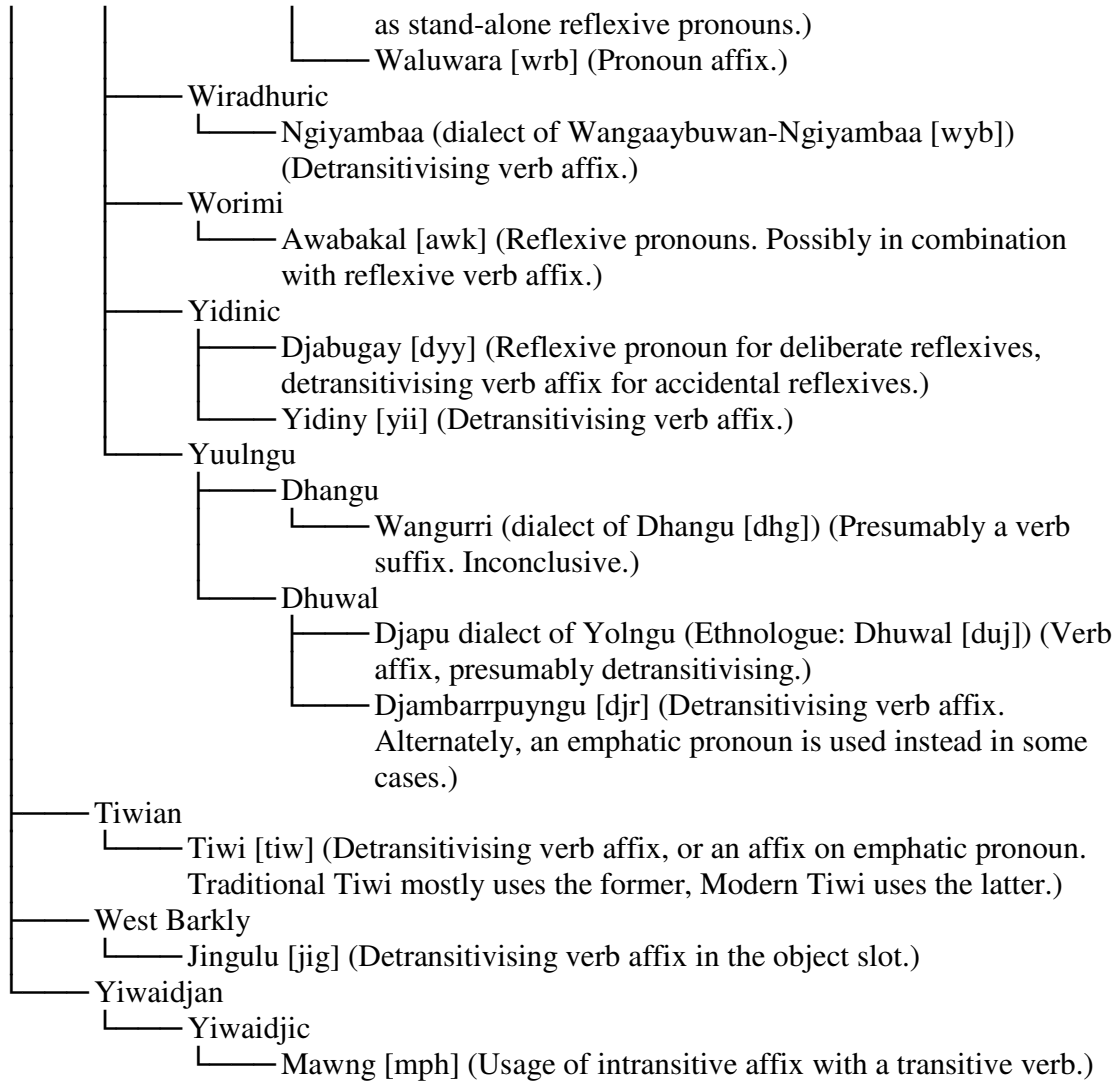
## Appendix 2: Australian language family tree

**Note:** This is an incomplete family tree, listing only those languages that are in my sample. See Ethnologue for the complete list.

**Note:** Spelling of language family names is taken from Ethnologue.



- Nyawaygi [nyt] (No straightforward equivalent of reflexive construction.)
- Guugu-Yimidhirr
  - Guugu Yimidhirr [kky] (Detransitivising verb affix.)
- Karnic
  - Karna
    - Diyari [dif] (Detransitivising verb affix.)
  - Palku
    - Arabana [ard] (Detransitivising refl/recip verb suffix.)
    - Pitta-Pitta [pit] (Refl/recip verb affix. Valency effects unknown.)
    - Wangkangurru [wgg] (Detransitivising verb affix.)
- Maric
  - Gunya [gyy] (Detransitivising verb affix.)
  - Margany [zmc] (Detransitivising verb affix.)
- Paman
  - Northern Pama
    - Uradhi [urf] (Detransitivising verb affix.)
  - Southern Pama
    - Mbabaram [vmb] (Possibly reflexive pronouns. Inconclusive.)
  - Western Pama
    - Kuuk Thaayorre [thd] (Detransitivising verb affix AND reflexive pronoun, to be used alternatingly or in combination.)
- South-West
  - Coastal Ngayarda
    - Martuthunira [vma] (Inconclusive.)
  - Inland Ngayarda
    - Panyjima [pnw] (Reflexive pronominal enclitic.)
  - Marngu
    - Garadjari [gbd] (Reflexive pronominal verb affix that replaces object/dative marker.)
    - Nyangumarta [nna] (“Verbal pronoun” affix.)
  - Ngarga
    - Warlpiri [wbp] (Presumably a pronoun affix. Unusual complications.)
  - Ngumbin
    - Djaru [ddj] (Pronoun affix.)
  - Wadjari
    - Watjarri [wbv] (Verb affix. Valency effects unknown.)
- Tangic
  - Yukulta [gcd] (Inconclusive.)
- Wagaya-Warluwaric
  - Warluwara-Thawa
    - Wakaya [wga] (Reflexive pronoun affixes that can double




Unclassified: Mpakwithi dialect of Anguthimri (Detransitivising verb affix.)

## Appendix 3: Reflexivity notes for Austronesian[13]

**Ata Manobo** [atd] (Austin 1966)
p46: This language seems to make a grammatically encoded distinction between regular reflexive predicates and reflexive causatives, where someone causes themselves to do something non-reflexive.
Reflexive causatives are simply "realized by a subject causative clause in which no other actor is involved nor is implied by the context." (Pro-drop?)
Valency decreasing [V(x)].
p92 (2.42): "That reflexivity which realizes the intentional action of the actor (subject) upon himself (the object) is not manifested by any Special verbal form. Rather, the goal is realized as the morpheme *lawa* 'body', and the actor is realized as the possessor of *lawa* (example 93); the whole phrase, then, is the object of the clause, and the subject is then omitted."
A reflexive pronoun [V(xf(x))], then, plus pro-drop.

**Toba Batak** [bbc] (Sugamoto 1984):
p150: Three strategies.

1. Pronominal strategy

Most common: 'diri' + pronominal clitic or 'ban' + pronominal clitic in object position. Both are used only for animate subjects; 'ban' furthermore is used only for the "physical self" and only in singular.
p166: Etymology: 'diri' (without pron. clitic) is also a noun meaning "person, personality".

'Ban' (with pron. clitic) can also be used non-reflexively to mean "his physical being" (or "my phys. being" or "your phys. being" etc.)
Clearly V(xf(x)).

2. Verbal strategy (or a beginning stage thereof)

'Diri' can be used without a pron. clitic when adjacent to a "[+AT]" verb.
[+AT] means Actor Trigger; meaning the second, VP-external argument (the "trigger") has the Actor theta role, and the first, VP-internal one is the patient. (As opposed to "patient trigger" verbs ([+PT]) where the theta-roles are reversed.) So the 'diri'-reflexive in this construction is in the non-agentive, VP-internal position.
The result can be compared to "Arnold self-terminated."
p168: sentences like this "are felt to be intransitive".
As opposed to their pronominal version, they tend to be abstract (e.g. "introspect" vs "see oneself"), iterative, or a habitual process or state.
"Verbs that typically denote highly transitive actions" are not suitable for this construction (examples: shooting, kicking, hitting).
So, this is detransitivisation. V(x).

3. Middle strategy

These are just lexical reflexives, with an intransitivising prefix 'mar-'.
'Mar-' does not mark reflexivity, though.
V(x).

**Bariai** [bch] (Gallagher & Baehr 2005):

[13] All notes are sorted alphabetically by SIL code.

p95: "Inflecting verbs which can be derived into middle verbs by the 3rd singular reflexive object enclitic =i"
p96: "Basic non-inflecting verbs. This category includes middle verbs which require pronouns as reflexive objects (...)"
p107: "(...) non-inflecting middle verbs do not take cliticised object pronouns, but instead require a free pronoun as a reflexive object."
p34: (82) shows transitives with refl enclitic '=i' become reflexive.
So reflexivity is indicated by dedicated (pronominal?) enclitics for one class of verbs and by pronouns used reflexively for another.
The enclitic probably reduces the valency; after all it can also be used to derive middles.
As for the pronouns, I don't know. Assuming V(xf(x)) just because they're pronouns would be jumping to conclusions.

**Begak dialect of Ida'an** [dbj] (Goudswaard 2005):
p279: In Begak there's an emphatic pronoun 'gerunay' "own, self"; when combined with the noun 'betuan' "body", the combination marks reflexivity.
Combined with a pronoun like 'rumo' "he" in example (33a), 'betuan rumo gerunay' is ambiguous between "himself" and "his own body". (If you really want to distinguish between those meanings.)
Presumed etymology of 'gerunay': conjunction/pronoun 'gunay' "and, in company of" infixed with reciprocal infix '-er-'.
Quite unequivocally the V(xf(x)) strategy again.
p281: This refl strategy "is rarely used, however. Most reflexive events are expressed by other means."
If the index can be trusted, there's no mention anywhere of what these "other means" might be.

**Dehu** [dhv] (Tryon 1967a):
p76: In reflexive predicates, the direct object is omitted.
Presumably valency decreasing.
(Very brief mention.)

**Gumawana** [gvs] (Olson 1992):
p338: For intentional reflexives, they just use coreference of the pronominal verb affixes for subject and object.
[Coreference refl. But intentional actions are necessarily agentive, yes?]
p277: For unintentional refls, there's a (stand-alone) refl pronoun, 'toini'. Requires phi-feature suffixes that agree with those on the verb.
'Toini' is often used with verbs taking the prefix 'ta-', which "appears to indicate that the initial DO is in a particular state." (p274)
(Actually judging from the only example given, I think it looks more like a middle.)
This language uses coreference and V(xf(x)).

**Iai** [iai] (Tryon 1968)
p87: The direct object of a refl predicate is just a pronoun; e.g. "I slap me."
[Coreference refl. Behaviour with non-lexical refls inconclusive.]

The author believes there is a zero third person singular reflexive pronoun involved.
(Brief description.)

**Nabaloi** [ibl] (Scheerer 1903):
p138 gives a table of reflexive sentences, but no glosses.
No other mention found.
Inconclusive.

**Ilocano** [ilo] (Rubino 1997):
p454: There are reflexive pronouns, which are identical to so-called 'bagi'-possessive pronouns, incorporating the root "bagi" meaning "body".
No dedicated refl strategies.
p117: Bagi-pronouns form one of two series of possessive pronouns, the other being 'kukua-' pronouns. Both 'bagi-' and 'kukua-' are stems to be combined with a suffix indicating person and number.
(Reminiscent of the Utrecht area dialectal reflexive 'je eigen' "your own".)
p454: Bagi-possessives are always used in absolutive case, and so are refl pronouns usually, but if the verb is intransitive in an "identificational" construction, the refl pronoun must be in oblique case. (It seems this "identificational" construction involves the verb being intransitive despite retaining a transitive meaning.)
p455: Refl pronouns can also be used with NPs instead of verbs: "Datayo ti timek ti bagbagitayo." 'We are our own voice.'
In conclusion, this seems like the V(xf(x)) strategy.

**Bahasa Indonesia** [ind] (Kana 1986):
p29: "Direct objects are reflexivised with the reflexive pronoun 'diri' "self", or 'diri' + possessive, usually followed by the emphatic 'sendiri' "oneself".
p30: The object of a reflexive benefactive (like "he bought shoes for himself") can consist of a personal pronoun followed by 'sendiri', or it can be a 'diri' reflexive. A reflexive direct object can only be a 'diri' reflexive.
Either approach seems to be V(xf(x)).

**Kaliai** [khl] (Counts 1969)
p74: Reflexive constructions are formed by coreference of subject and object verb affixes.
[Coreference refl. Behaviour with non-lexical reflexives inconclusive.]
The examples given seem to be idioms, translated as e.g. "they return", "they hide", "they disperse".

**Da'a** [kzf] (Barr 1988):
p13: "(...) several ASPECTS are marked by inflectional [verbal] affixes. These Aspects are: Reciprocal and Multiple Actors (si); (...) Reflexive (notiN/motiN) (...)"
p35: 'notiN-' is the "realis" version and 'motiN-' the "irrealis" version.
These prefixes are affixed to "Derived Affective" stems only. (They combine with a prefix 'ka-' and become 'notingga-' and 'motingga-'.)
Is that V(x)?

p36: "It should be noted that this is not the only strategy in Da'a for indicating [reflexivity]. One can also use the pattern: agent-verb-body-his own". (His body.)
Example (137) is glossed: 'person that AF,REAL-hit body-his own' "That person hit himself."
"(...) what classes of verbs can be made reflexive by affixation and what classes use the second strategy noted above." The author seems to believe any verb uses either one strategy or the other.
So there's verb inflection [presumably detransitivising; V(x)] and there's a body part strategy [V(xy)].

**Lau** [llu] (Ivens 1921):
p17: "The word *mara* with suffixed pronoun is used to denote reflexive action: *nia saungia marana*. It also carries the meaning self, of one's own accord"
Context wrt what this "word" is: p15: "Almost any word may be used as a verb by prefixing the verbal particles, but some words are naturally verbs as being the names of actions and not of things. There are also verbs which have special forms as such by means of a prefix or termination."
Suggests that this "word" is not necessarily a verb, but can be used as a verb.
p57: "Mara-" is listed in the vocabulary section as a "noun", and meaning "of one's own accord, alone".
p12: "Mara" is one of a number of "words (...) which show a noun termination but which have no independent existence as nouns"
Perhaps "mara" is much like English "self", which needs a pronoun to be usable.
The strategy is probably V(xf(x)).

**Lewo (Vanuatu)** [lww] (Early 1994):
p314: "Lewo does not have a special morphological marker or syntactic construction for expressing the semantic categories of reciprocal or reflexive"
"Two devices Lewo employs for expressing reflexive meaning are the use of independent person pronouns as objects, rather than object person suffixes, combined with the use of the modifier 'si' "again" (...)."
p251: 'si' is also used for reciprocals.
p252: Equivalent of "they hit them" is described as "triply ambiguous"; "them" could be another group, or it could be the same group, reflexively or reciprocally (where reciprocal can furthermore be "either others and self, or others only"). (More vagueness than ambiguity proper; referent is just unspecified, it seems.)
'Si' disambiguates; with singular subject refl reading is enforced. Often the "limiter" 'ga' is also involved.
With plural subjects, 'si' just limits the ambiguity/vagueness to refl/recip, and context has to determine which is it.
This looks like V(xf(x)) again. (The object used for refls is more marked than a regular object.)

**Mukah dialect of Central Melanau** [mel] (Blust 1988):
p156: "Reflexive constructions are formed with 'diri?' "self"."

(Not the most useful one-sentence description. 'Diri?' is a separate word in its own right, whether it's pronoun or an adverb or something else altogether is anyone's guess.) (Inconclusive.)

**Buru** [mhs] (Grimes 1991):
p161: Three "forms" that indicate reflexive reading:
'emsikan' "by oneself (without others' company)"
'emhewak' "by oneself (without others' assistance)"
'benima(-k)' "very own (a unique relationship excluding others)"
Examples with each translate respectively to "He beat himself (nobody else involved)", "He beat himself (unassisted)" and "He beat himself (and nobody else)".

On the grammatical nature of refl auxes:
These forms translate to adverbs in English, but Grimes never calls them adverbs. Footnote 21 on p161 actually refers to them as "post-verbal auxiliaries".

p232: "post-verbal auxiliaries" are semantically speaking more like evaluating comments on the sentence than like auxiliaries as English uses them, "and can be considered to be external to the clause proper". Such auxiliaries express things like "not", "maybe", "immediately", "certainly", etc.

"The comment is nonclausal, not taking its own arguments or modifiers, but functions as an auxiliary to the whole."

"when a post-verbal auxiliary is included within the nucleus of the clause, it functions as a modifier to the verb [...]. More commonly, however, post-verbal auxiliaries appear following a clause, with clausal scope."

(Are these things really auxiliaries? Is the main verb finite? Does the "aux" have tense features? "External to the clause proper" implies no to both.)

Many of them have clear verbal etymologies, though.
Maybe they're like a matrix clause consisting of only a verb?
"Their [i.e. refl forms'] normal position in the clause is a post-verbal modifier of manner".
Multi-functional; not restricted to indicating reflexivity proper
"Emhewak" can also be a verb, translated in example (65) as "he by-himselfed his house (i.e. made it unassisted)."
p161: "Distributionally, these forms [i.e. the three reflexivising auxiliaries] may modify either nominals or verbals, or may be used as the main verb."

On the behaviour of reflexives with or without them:
p162: no condition B; equivalent of "he beat him" is ambiguous between coreference (reflexivity) and separate reference. Refl adverbs serve to disambiguate.

(Is this refl reading also available for non-agentive verbs like "know" or "hate"?)
Object can be omitted; with refl aux but no object, the reflexivity is unspecified (because the refl forms are not dedicated reflexivisers); (60) "da iata emhewak" and "da iata emsikan" both translate to "he cut [something] by himself", where the thing that is cut could be anything, including the subject himself. (These refl forms can also be used with intransitives, with no refl meaning.)
p355: Objects can also be omitted without any refl aux.
p163: (66) also has an omitted object and no refl aux, and is dubbed "implied reflexive", though the verb used is "to bathe" which may well be lexically reflexive. Examples of

object omission on p355 have different implications, with idiomatically understood (non-refl) objects.
I'd conclude that when the object is omitted and there's none of the refl auxes present, the reading is also optionally reflexive.
p356: Judging from their meaning, objectless sentences are definitely still (at least semantically) transitive. Usually when an object is omitted, its referent is (expected to be) understood. (See examples (39) and (40).)

**Mamanwa** [mmn] (Miller 1976):
p52: Reflexivity is encoded by "Aspect III", together with reciprocal, distributive, causative, augmentative, diminutive, repetitive and non-purposeful.
p56: Morphologically speaking it seems to be an affix on the verb ('paka' or 'pati', depending on the verb class).
Perhaps it detransitivises the verb.
Inconclusive.

**Maori** [mri] (Pucilowski 2006):
p70: "Maori does not have special reflexive pronouns, rather reflexivity is expressed by ordinary non-reflexive pronouns with or without a support form anö ‘again’ or (an)ake ‘only’."
[Coreference refl. Usage for non-lexical refls inconclusive.]
Support forms are used for disambiguation when needed. (This is common; a reflexivity-emphasis adverb with a meaning along the lines of "alone".)
I’d predict that support forms are obligatory for all non-lexical reflexives. Then it would be an adverbial reflexive language except for (some) lexical reflexives.
"Bauer (1997) (...) notes (...) that the binder must normally precede the bindee in order for the reflexive interpretation to be unambiguous (Bauer 1997: 637)"
Reminiscent of Buru [mhs]?
(This is an MA thesis about ergativity. Reflexivity is mentioned in passing.)
Addendum (Bauer 1993):
p152 confirms: "There are no reflexive pronouns in Maori, although 'anoo' "again" can be added to personal pronouns to serve this purpose (...) It can also be added to non-pronominal NPs (...) 'Anake' "alone", "only" is in some environments an alternative to 'anoo'."
p155 mentions "the reflexive particles" (presumably thus referring to the above).
p165: "Since anaphora and reflexivity are not clearly distinguished"
p168: "It appears that, without the support form, the sentence is ambiguous between a reflexive and a non-reflexive reading." (Said of example (681) "Mary washed herself".)
p177 (among others): The "support" form is actually sometimes obligatory.
p185: "Reflexive pronouns" (i.e. pronouns with a support form, I presume) can be used as emphatic pronouns too.
p271: "only canonical transitives with 'i' are normally read as reflexive without 'anoo' support.

**Nengone** [nen] (Tryon 1967b):

p67: "The Reflexive Pronoun Phrase is composed of an obligatory Nucleus Personal Pronoun, plus an obligatory Nucleus Reflexive particle ko."
This must be the V(xf(x)) strategy.

**Big Nambas** [nmb] (Fox 1979):
p30: 6 of the language's 10 pronouns can be used as reflexive objects, or as non-reflexive objects. (All examples are of agentive verbs.)
p81: There are also pronominal verb affixes that can be used as reflexive objects.
[Coreference refl. Behaviour with non-agentive verbs unknown. No known alternate refl strategies.]

**Niuafo'ou** [num] (Tsukamoto 1988):
p111: "Neutral [words] generally have a reflexive meaning when used intransitively."
p243: "Pronouns (...) and the anaphoric demonstrative may (...) be used reflexively"
So this language uses both "valency decreasing" (or rather, just intransitive usage) [V(x)] and a pronominal strategy [V(xf(x))].

**Uma** [ppk] (Martens 1988):
p190: There's a verb prefix cluster 'me-ng-ka-' or 'ng-ka-' to indicate deliberate reflexive action.
Compositionality: 'Me-ng-ka' glossed as "INT-AG-AFF" (intransitive-agent-affective).
Often used together with refl prefix 'li-'. (See below.)
V(x), certainly.
p191: There's also a transitive form 'pe-ng-ka', when there's an additional (indirect?) object involved. (Examples are "they flung themselves onto sharpened stakes" and "she shut herself up from talking to her child".)
Reducing V(xxy) to V(xy).
p192: There's an additional refl verb prefix 'li-'. (Allomorphs: 'la-', 'ra-', 'ti-'.)
It's used almost exclusively in combination with the 'me-ng-ka-'/'pe-ng-ka-' cluster. (Why isn't it considered part of it?)
It "reinforces the reflexiveness of the action." (Does that mean it's for emphasis?)
This language uses detransitivisation.

**Rapanui** [rap] (Du Feu 1996):
p96-8: No reflexive pronouns. However there's an emphatic demonstrative "a' that is placed after a personal pronoun (object?) to effect a reflexive reading.
Looks like V(xf(x)).
(Rapanui glosses are Very Difficult to read.)

**Roma** [rmm] (Steven 1991):
p79: "This and the following verbs are reflexive and require an object suffix that agrees with the subject." (Footnote regarding three one-word sentences meaning "they bathe", "they shaved" and "they sleep"; possibly inherently reflexive)
One other mention that only says reflexive verbs "inflect both subject and object affixes".

I think this is reminiscent of Frisian again; subject and object are represented just like subjects and objects in any other transitive, except that they happen to corefer. All examples are lexical reflexives.
Inconclusive.
(This document focuses on phonology.)

**Samoan** [smo] (Mosel & Hovdhaugen 1992):
p726: Samoan does not have derived reflexive verbs or reflexive constructions.
p773: (paragraph on ergativity:) "There are no ergative reflexive constructions except in Biblical Samoan".

On transitives:

p724: There are no transitives proper (defined as strictly bi-valent verbs expressing transitive actions). No Samoan verbs require more than 1 argument (S or O), "[e]xcept for a very small class" (of verbs that aren't semantically transitive anyway, but need "an ergative or locative-directional argument").

Certain verbs *can* be used transitively, but an object is never obligatory.

On what Samoan does instead of refl verbs and constructions:

p726: 1. "Non-ergative verbs which express actions involving the whole body or person" (e.g. washing oneself, killing oneself)

No examples, no further explanation. [Is there an (overt) object?]

"Non-ergative verbs" are a larger class of verbs. These particular ones are probably dedicated always-reflexive verbs for just these "reflexive" actions. (If so, arguably not reflexivity proper.)

2. Labile causative verbs: in ergative constructions they denote non-reflexive causatives (causing someone else to A), in non-ergative constructions they denote reflexive causatives of otherwise non-reflexive predicates (causing yourself to A). The subject (S) of this latter construction is agentive.

(In the one minimal-ish pair given, the difference between the ergative and non-ergative construction manifests itself only in the cases of the arguments. The verb itself is ambiguous between erg and non-erg.)

> Non-ergativity, again. I think I see a pattern.

p101: Labile verbs are "verbs which are alternatively constructed like ergative verbs or non-ergative verbs. In agreement with their ergative or non-ergative construction, they either express a transitive action or, alternatively a semi-transitive or intransitive state of affairs."

3. "VP-ABS+POSS constructions" are used for reflexive actions on only part of a person, such as just their body, or part of their body, or an aspect of their personality.

The predicate is ergative (!), the logical object is expressed in absolutive case, and the logical subject (the agent) is expressed as its possessor.

Think of "shaved the chin of John."

I'd speculate "John" is represented twice, as a covert subject and as the possessor, to get both the possessor and agent theta roles right. "The chin of John" then stands proxy for "John", as with so many body part reflexives.

> Defies the pattern; no non-ergativity this time. So there are at least two strategies employed; non-ergativity and a body part reflexive strategy.

(4. Other expressions, for translations of actions that are idiomatically expressed with a reflexive in English but not in Samoan. Including "he killed him." Here too, arguably not reflexivity proper, not in Samoan.)

On non-ergativity and how it triggers a reflexive reading:

p100: a verb is an ergative one if it can have an argument in the ergative case; if not, it's non-ergative.

Ergative case is exclusively the case of the subject of a transitive. Ergo, non-ergative verbs cannot be transitive in an erg-abs language.

p695: Ergative verbs are almost all just transitive predicates, but "non-ergative predicates express a wide variety of states of affairs including intransitive actions, processes, states of being, qualities and quantities".

p105: Non-ergative verbs "do not share any particular semantic feature except that they denote states of affairs involving one participant."

(Non-ergative verbs are more or less just "everything else".)

Solution: (non-body part) refls rely on valency decreasing.

**Seimat** [ssg] (Wozna & Wilson 2005):

p71: Adverb 'puki' indicates reflexivity by being placed before the coreferential object pronoun.

E.g. "John shaved puki him."

'Puki' can also be used non-reflexively; placed before the subject instead, it indicated emphasis along the lines of "himself" or "by himself".

The word 'alia-ke' (translated as "back") often shows up in reflexive constructions too. (But apparently not always.)

Looks like V(xf(x)).

**Sangirese** [sxn] (Adriani 1893):

p250: Equivalent of refl pronoun is 'batangeng' "oneself".

Stem 'Batang' means "fallen tree; lying tree trunk". In several Indonesian languages the word for "tree trunk" is also used for "body", suggesting a body part noun origin.

Pronominal suffixes can be adjoined to 'batangeng' to form an equivalent of "myself", "yourself", "himself", etc. ("Literally 'his own'.") Not obligatory, and usually not necessary.

Seems quite an unequivocal case of V(xf(x)).

(Note: This grammar is in (rather archaic) Dutch.)

**Tawala** [tbo] (Ezard 1992):

p189: There's a refl verb affix.

No straightforward transitives-turned-reflexives among the examples. (Most of them are about transformations, often actually effected by another person than the transformer, like a magician bewitching someone.)

p220: Same affix is also used for reciprocals.

Inconclusive.

**Tagalog** [tgl] (Ramos 1974):

p110: The object of a Tagalog refl can be expressed by 'ng sarili' "one's self", or be omitted altogether. (Omission is most common.)
The author subscribes to an analysis where the verb has two arguments (the logical subject A and object O) at an underlying level; "[t]he identical O is, however, deleted before it reaches the surface. In some instances, it does surface, especially when subjectivalized."

Addendum (Blake 1925):
p211 mentions reflexive pronouns formed by personal pronouns in connection with 'din' or 'sarili'.
(Ramos 1974 mentioned 'ng sarili', but not that 'ng' is a pronoun in its own right, nor did it mention 'din'.)
So it's V(xf(x)).

**Iduna** [viv] (Huckett 1974):
p72: "Reflexive verbs always occur with a reflexive suffix which must agree with the person prefix."
(Nothing more is said about it.)
Inconclusive. I could speculate that this suffix decreases the valency, but there's not enough information to tell.

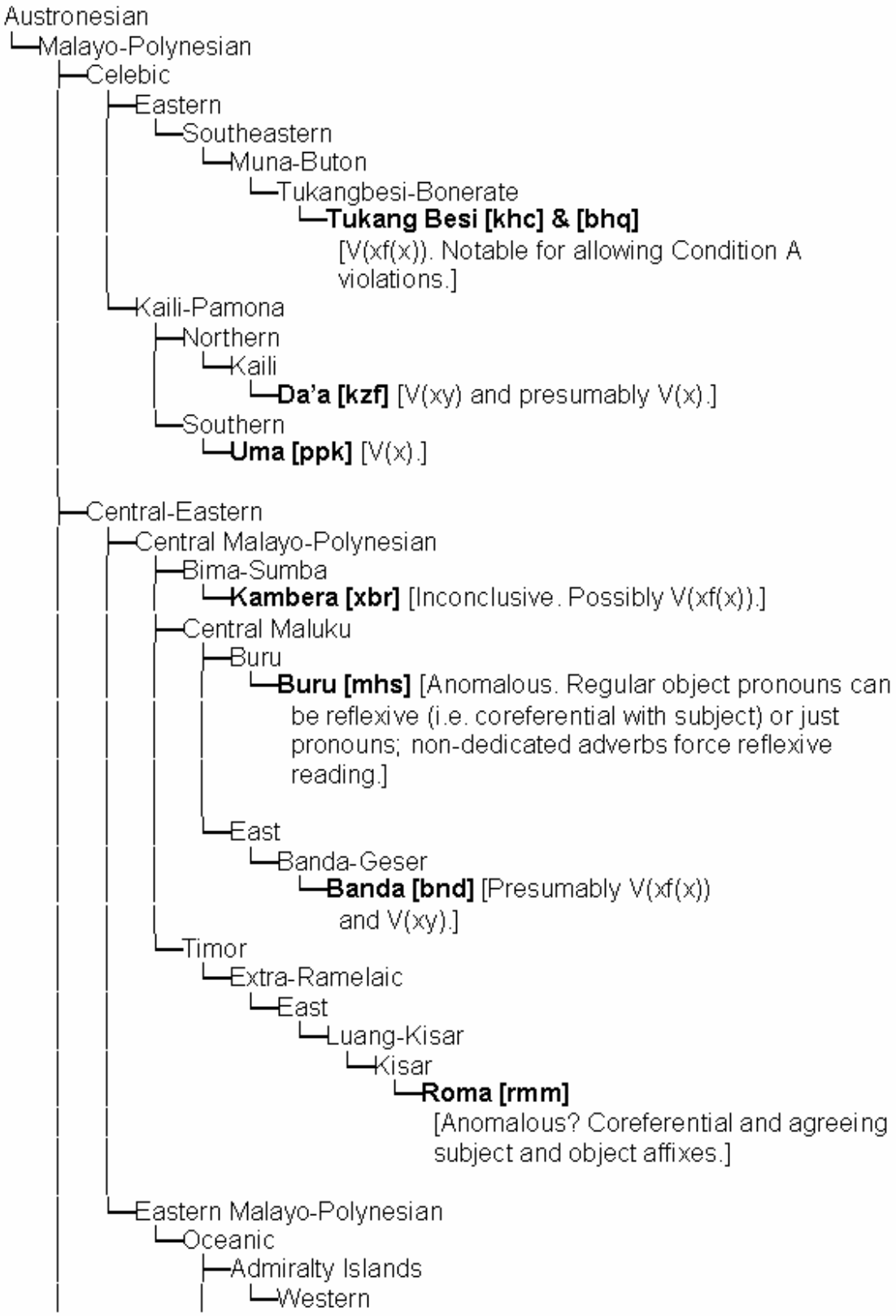
**Kambera** [xbr] (Klamer 1994):
p164: There's a reflexive pronoun 'wiki' "self", which can also be used non-reflexively to mean "own" (as in "my own house").
It can be used as an indefinite object (like in English), or it can be used with an article and agree with the subject, in a construction where (apparently) there is object agreement marking on the verb that corefers with the object but does not agree with it in person and number. See p165 (82). (I'm starting to wonder if there isn't a typo involved.)
p311: The author calls 'wiki' a "reflexive noun", not a pronoun.
Inconclusive. Possibly V(xf(x)).

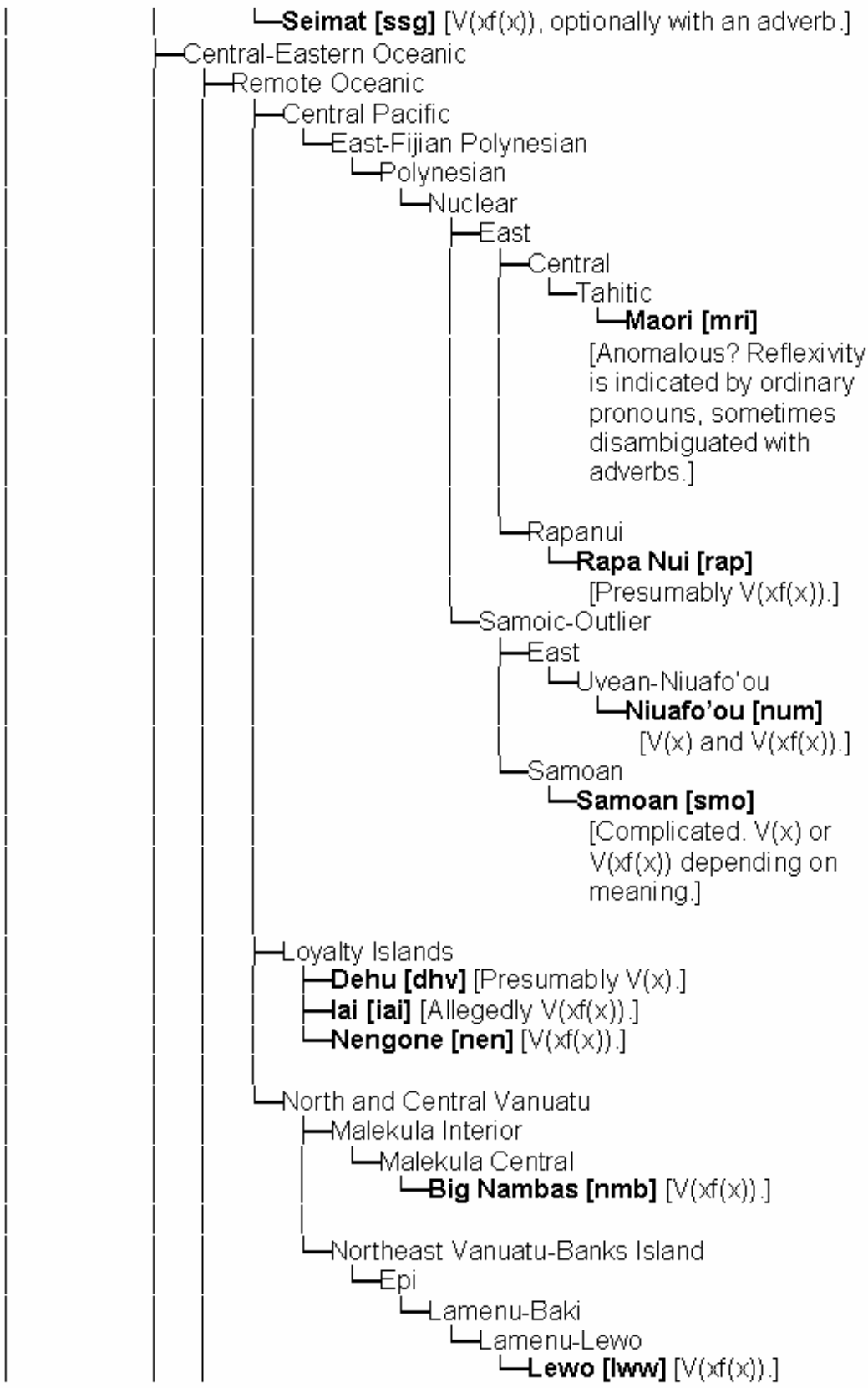
**Malagasy** [macrolanguage] (Pearson 2001):
p50 mentions a "reflexive anaphor 'tena'".
p100: "Reflexive anaphors in Malagasy are built from the noun tena (lit. “body”). In certain contexts, tena may be used by itself as a ‘bare’ NP with reflexive meaning (38a). In other cases, the reflexive takes the form 'ny tenany' “his/herself” (38b). The distributional properties of 'tena' and 'ny tenany' are poorly understood."
At any rate, looks like V(xf(x)).
Note: There are ten different languages called "Malagasy" in this branch. Furthermore the document I'm using is not a complete and impartial grammar, but an argument that just mentions the relevant subject once or twice.

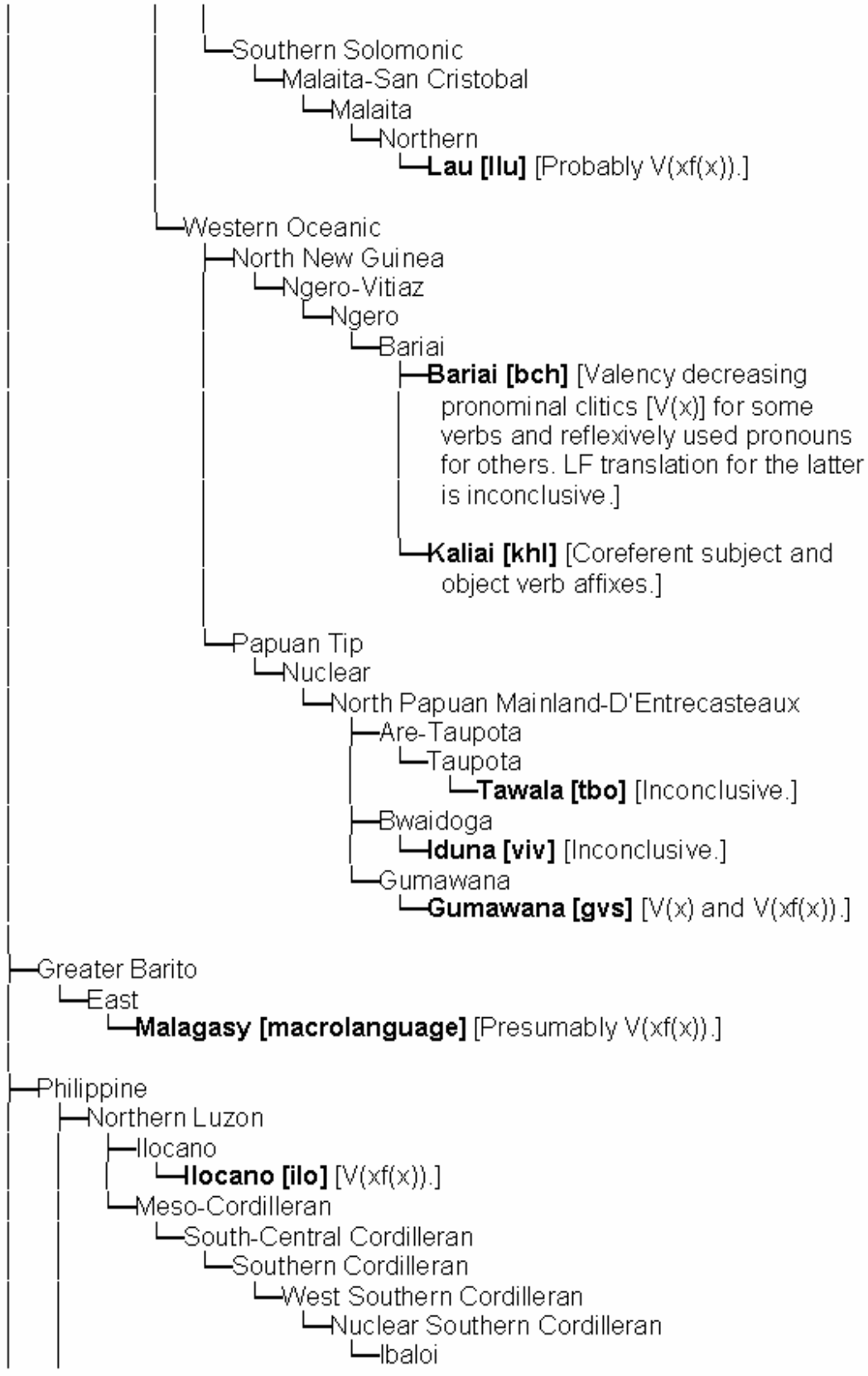
**Tukang Besi** [macrolanguage] ([khc] and [bhq]) (Donohue 1999):
p417: "The nominal 'karama' is used to form reflexives, amongst other such as emphatic and adverbial uses and it obligatorily occurs with a possessive suffix."
It's described as a 'floating modifier'.
Used reflexively it has to be in a "KP", used as an adverbial modifier it's a bare NP.

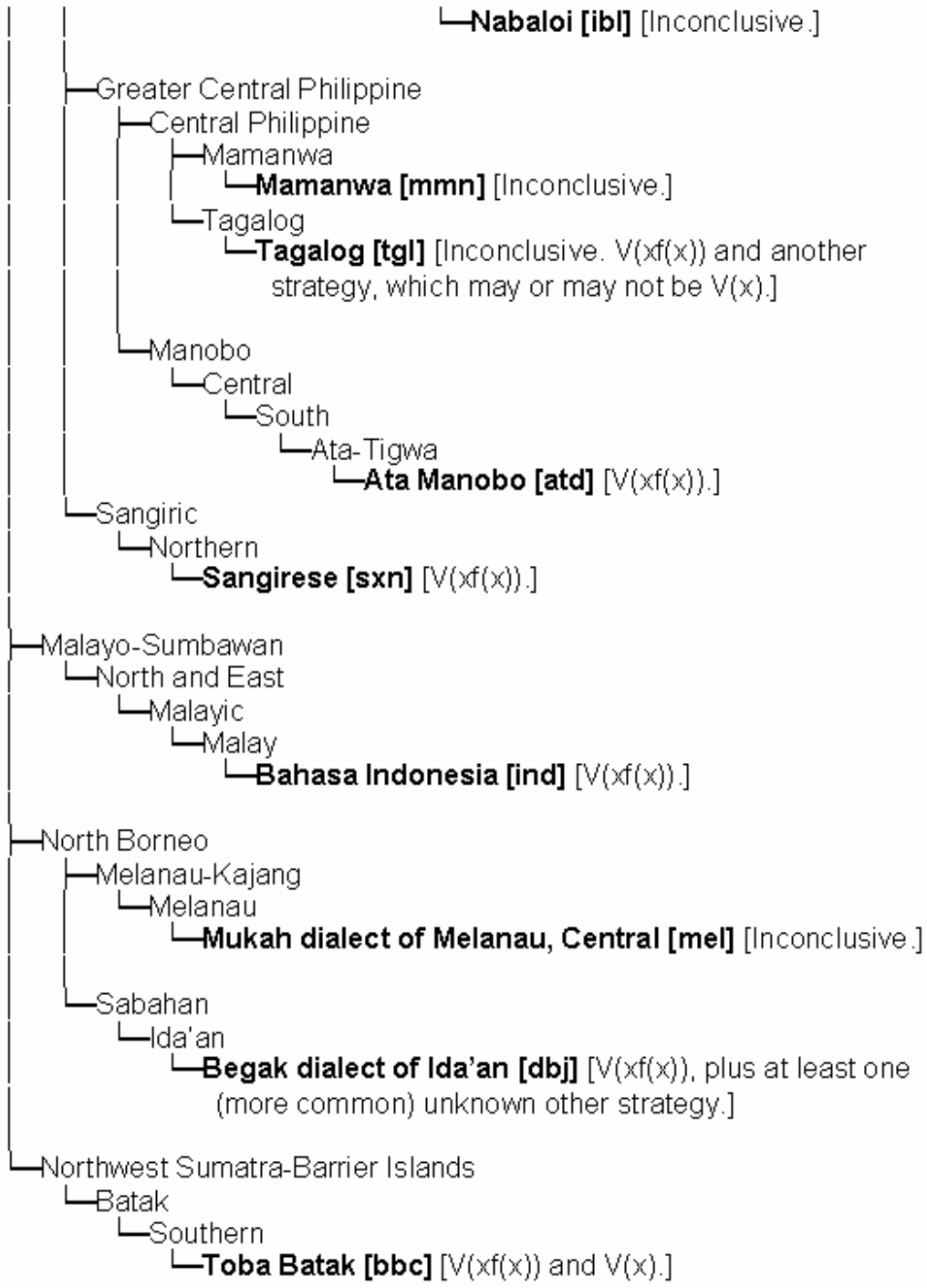
A KP appears to be a phrase headed by a case feature.
Its occurrence in an example is glossed as "self-1SG.POSS". Quite literally "my self".
Adverbial (non-refl) usage is glossed the same way.
p418: Reflexive usage is "synonymous with 'orungu-' "body", also obligatorily possessed when forming reflexives".
It can appear in (what the author thinks is) nominative case, but will be understood as the object ("[O]") either way. (And if the subject and 'karama' are in the wrong syntactic positions, the sentence becomes ungrammatical, but case marking makes no difference.)
With two-predicate sentences (like "I let her talk") 'karama' refers back to the lower predicate, as usual. However, with arguments with different person/number features, it's possible for embedded 'karama' to refer back to the matrix subject if it agrees only with that one, seemingly defying condition A. E.g. "she made me buy a shirt for herself", "I made the other person buy a shirt for myself."
(Different behaviour for adverbial usage: normally taken to refer to matrix subject.)
Curious situation. But the relf strategy is clear cut; this must be V(xf(x)).

## Appendix 4: Austronesian language family tree




Seimat [ssg] [V(xf(x)), optionally with an adverb.]
Central-Eastern Oceanic
Remote Oceanic
Central Pacific
East-Fijian Polynesian
Polynesian
Nuclear
East
Central
Tahitic
Maori [mri]
[Anomalous? Reflexivity is indicated by ordinary pronouns, sometimes disambiguated with adverbs.]
Rapanui
Rapa Nui [rap]
[Presumably V(xf(x)).]
Samoic-Outlier
East
Uvean-Niuafo'ou
Niuafo'ou [num]
[V(x) and V(xf(x)).]
Samoan
Samoan [smo]
[Complicated. V(x) or V(xf(x)) depending on meaning.]
Loyalty Islands
Dehu [dhv] [Presumably V(x).]
Iai [iai] [Allegedly V(xf(x)).]
Nengone [nen] [V(xf(x)).]
North and Central Vanuatu
Malekula Interior
Malekula Central
Big Nambas [nmb] [V(xf(x)).]
Northeast Vanuatu-Banks Island
Epi
Lamenu-Baki
Lamenu-Lewo
Lewo [lww] [V(xf(x)).]


Southern Solomonic
Malaita-San Cristobal
Malaita
Northern
Lau [llu] [Probably V(xf(x)).]
Western Oceanic
North New Guinea
Ngero-Vitiaz
Ngero
Bariai
Bariai [bch] [Valency decreasing pronominal clitics [V(x)] for some verbs and reflexively used pronouns for others. LF translation for the latter is inconclusive.]
Kaliai [khl] [Coreferent subject and object verb affixes.]
Papuan Tip
Nuclear
North Papuan Mainland-D'Entrecasteaux
Are-Taupota
Taupota
Tawala [tbo] [Inconclusive.]
Bwaidoga
Iduna [viv] [Inconclusive.]
Gumawana
Gumawana [gvs] [V(x) and V(xf(x)).]
Greater Barito
East
Malagasy [macrolanguage] [Presumably V(xf(x)).]
Philippine
Northern Luzon
Ilocano
Ilocano [ilo] [V(xf(x)).]
Meso-Cordilleran
South-Central Cordilleran
Southern Cordilleran
West Southern Cordilleran
Nuclear Southern Cordilleran
Ibaloi


Nabaloi [ibl] [Inconclusive.]
Greater Central Philippine
Central Philippine
Mamanwa
Mamanwa [mmn] [Inconclusive.]
Tagalog
Tagalog [tgl] [Inconclusive. V(xf(x)) and another strategy, which may or may not be V(x).]
Manobo
Central
South
Ata-Tigwa
Ata Manobo [atd] [V(xf(x)).]
Sangiric
Northern
Sangirese [sxn] [V(xf(x)).]
Malayo-Sumbawan
North and East
Malayic
Malay
Bahasa Indonesia [ind] [V(xf(x)).]
North Borneo
Melanau-Kajang
Melanau
Mukah dialect of Melanau, Central [mel] [Inconclusive.]
Sabahan
Ida'an
Begak dialect of Ida'an [dbj] [V(xf(x)), plus at least one (more common) unknown other strategy.]
Northwest Sumatra-Barrier Islands
Batak
Southern
Toba Batak [bbc] [V(xf(x)) and V(x).]

## Appendix 5: Passivisation and reflexivisation notes[14]

**Eastern Aranda** [aer] (Wilkins 1989)

**Reflexivisation:**

p272: Reflexive suffix *-lhe*; detransitivises transitives (and transitivises ditransitives)
Refl suffix is also used for non-agentive predicates like "to break" (to break itself); middle voice?
When refl suffix is used with ditransitive, S can be agent and a location (like "I pulled the prickle out of myself"). Compared to middle voice because there can be an S and an O argument but no A argument.
Side note: there are some idioms involving refl suffix applied to verbs (e.g. "to lift up oneself" = "to boast")

**Passivisation:** N/A

p463: "(...) it is worth mentioning that there is no structure like a passive which enables an argument in O grammatical function, or any other non-S/A function, to become a subject."

**Arabana** [ard] (Hercus 1994)

**Reflexivisation:**

p116: "the reflexive is expressed within the verb (5.3.3)."
There's an intensifier adjective 'manhi', translated as "self" but better understood as meaning "alone" or "unaided", which does not fulfill the role of a reflexive pronoun, according to Hercus. (Examples are given of its usage in non-reflexive sentences. I don't have the impression it's EVER used in a reflexive, in fact.)
p152 (5.3.3) is more relevant.
Reciprocal and reflexive are "closely connected"
Both formed with a detransitivising suffix. (Reflexive: *-nta*)
Reflexive is also used for reciprocal
Reciprocal can also be marked by suffix *-(k)a* followed by refl *-nta* (so if I understand correctly, there's an explicitly recip affix *-(k)a-* that can be left out).
Some verbs are lexically reciprocal, or have irregular stems just for the reciprocal.

**Passivisation:**

p191: "The habitual participle can (...) be used with a passive meaning to describe the object of habitual action." This participle is made with a verb affix.

Examples:
not woman-ERG know-HAB
"It is something that is unknown to women"
evil.magic turn-BEN-HAB
"evil magic that can be turned away".

p192: "The passive use of the habitual participle is common even with verbs that only take a 'cognate' object"

dance-HAB dance-HAB song-name
"a verse that one can dance to"

[14] All notes are sorted alphabetically by SIL code.

p194: "When the focus is on the object the obligatory participle conveys a passive sense" This participle is also made with a verb affix. (But when the focus is on the subject the same participle is active.)

man this kill-OBLIG
"This fellow has got to be killed."
kill-OBLIG
"(He) has got to be killed."
food this eat-OBLIG
"This food has got to be eaten."

Can also be used with intransitives for a pseudo-passive reading:

(...) camp sleep-OBLIG-FIN
(...) the sort of bed that one can get to sleep on.

So there are at least two constructions that can get a passive reading, and both are affixes on the verb.

**Awabakal** [awk] (Threlkeld 1892)

**Reflexivisation:**

p45, p48: Reflexive is indicated by a pronoun. Refl pronouns have an intensifier particle *-bo*.
p53, p56: Apparently there's also a refl verb affix *éun*. (Hard to tell; no glosses.)
p49 calls this a "reflexive modification of the verb", and "active-intransitive".
So I'd say we have both familiar strategies again; valency reduction as well as V(xf(x)).[15]

**Passivisation:**

p43: "(...) participles in the passive voice (...)"
It seems passivity is indicated on the participle.
p164 (15) lists "-ian" as a verb suffix indicating "past time ; with passive sense, when required."

It also lists "-enden, -unden, -anden" as a verb suffix that "adds the idea of 'made' or 'did' to the root idea of the verb" and "is sometimes equivalent to the passive".
p184 (54): "Passive voice" is listed among verb tenses.
p184 (54/55): "For the passive voice, use the same tense-forms as in the active voice, (...) but prefix to them the accusative cases of the personal pronouns ; thus, ganya-in gori bumaga, 'I was beaten lately'; lit., '(some one) beat me lately.' But the ablative of the cause or instrument may also be used to form a passive voice; thus, ganya gidjial dtannaga, 'I am pierced by a spear.'"

If it's literally "(some one) beat me lately", with a null subject, then that's technically not a passive.

*** On "passive pronouns":
p183 (52): The 1st and 2nd person nominative pronouns have one form for active and one for passive predicates.
Bottom line: it would seem that passives are formed by means of several non-dedicated verb affixes.
Incidentally the subject pronoun for 1st and 2nd person is different for actives and passives.

[15] By V(xf(x)), I refer to the reflexivisation strategy that protects one argument by means of a function, like the reflexive pronoun strategy in English.

**Begak dialect of Ida'an** [dbj] (Goudswaard 2005)

**Reflexivisation:**

p279: In Begak there's an emphatic pronoun 'gerunay' "own, self"; when combined with the noun 'betuan' "body", the combination marks reflexivity.
Combined with a pronoun like 'rumo' "he" in example (33a), 'betuan rumo gerunay' is ambiguous between "himself" and "his own body". (If you really want to distinguish between those meanings.)
Presumed etymology of 'gerunay': conjunction/pronoun 'gunay' "and, in company of" infixed with reciprocal infix '-er-'.
Quite unequivocally the V(xf(x)) strategy again.
p281: This refl strategy "is rarely used, however. Most reflexive events are expressed by other means."

If the index can be trusted, there's no mention anywhere of what these "other means" might be.

**Passivisation:** N/A

p122: In this lang's equivalent of passive voice - "Undergoer Voice" - the logical subject remains a core argument.
Generalised to all West-Austronesian languages.

**Dyirbal** [dbl] (Dixon 1972)

**Reflexivisation:**

p89: Verbal affixes to transitives, some of which take away the last segments of the stem. (And some more irrelevant phonological intricacies.)
"A reflexive form functions like an intransitive stem (...)"
Reflexive form can also occur without reflexive meaning; it's then just an intransitivised verb. ('False reflexives'.)

Both true and false refl formation are fully productive.

Emphatic affix *dilu* disambiguates; forces reflexive meaning.

False reflexives convey potentiality rather than actuality. (Actual counterpart is expressed by "-*ngay* constructions".)

Sometimes the object of a reflexive becomes ergative rather than dative.

(Is this about true or false refls? Unclear.)

**Passivisation:** !N/A

Note: "Guwal" is a colloquial register while "Dyalnguy" is a more polite register.
p296: In Guwal there are transitive verbs with intransitive counterparts; intr versions can have logical subject as subject, OR logical object.

The verb form changes between transitive and intransitive, but the difference does not seem to be determined by a simple verb affix. Either the verb stem changes or it's a more complicated (irregular?) derivation.

Dixon seems to think of them as "pairs of stems" (p298).

The intransitive stem might as well be a different lexical entry in its own right, rather than a derived passive from a lexically transitive stem.

Debatable whether this is a passive. There's also an S=A version of the same operation, and the translations of the examples don't seem like passives at all (e.g. wake/awaken, take out/come out).

I wouldn't count it as a passive.

Inconclusive.

Addenda from Mel'čuk 1977:

p3 has example (8) translated as "The woman was hit by the man", and various variations thereupon.

p12 has example (18) translated as "The woman was – hit", with the A not indicated. ((19) has a version saying "I was hit".) The A can be deleted in this construction, but not the O.

p18 has two active transitive sentences with *to hit*, both "The man hit the woman".

p29: Using a definition of "passive voice" based on which voice is most marked, "*balgan*, *buran*, *wadin*, etc. are active, and *balgalnanu*, *buralnanu*, *wadilnanu* are passive." He also mentions that Dyirbal passives "correspond to" Indo-European actives and vice versa.

(I really don't buy this definition of "passive".)

p30: Defining "passive" as the voice where the logical object is the syntactic subject, "the Dyirbal passive is the basic (=primitive) voice while the active would be derived from it by the operation of activization."

p31: This 'activisation' operation detransitivises a transitive verb, apparently with the morpheme *ŋay*.

But the active verbs using this morpheme on p18 still had two participants. Was one of them an adjunct? (I could answer that question if this paper had glosses.)

p30 also says that this definition entails that "the verb would be transitive in passive and intransitive in active". But a passive can't be transitive; that would mean the A is still a core argument. (It wouldn't be a passive by my definition, anyway.)

How about the sentences on p12? Those aren't transitive, are they? They show the logical subject can be omitted, but not the object (the syntactic object but not the subject).

Bottom line: Dyirbal is weird. At any rate this is nothing like what English calls the passive. It doesn't fit the definition I'm using. N/A.

**Djaru** [ddj] (Tsunoda 1981)

**Reflexivisation:**

p152: "'Reflexivisation/reciprocalisation' does not affect the transitivity of a sentence." There's one morpheme (glossed as 'M' for "middle") for refl, recip and "extended reflexive". It attaches to a pronoun. (Which incidentally can attach to a verb again, like in Wakaya [wga].)

No reflexive readings available without reflexive morpheme. (As expected.)

An "extended" refl is apparently a refl used when an action carried out by "us" affects "me", or one carried out by "me" affects "us".

So, presumably, V(xf(x)) again. (Because the reflexive morpheme attaches to a pronoun.)

**Passivisation:** N/A

p193: "Djaru lacks causative and passive constructions. But (...) some of intransitive VCs of Si=Ot type can have a 'passive' meaning (or, at least , a meaning similar to passive)"

p155 gives examples:

fat-INST C-1SgNom-M burn-CONT-PAST fire-LOC

'I got burnt by fat on the fire'

That sounds more like 'I burned by means of fat on the fire.'

catch/stick-PAST C-1SgNom-M leg-INST-CLC
'I was caught/got stuck by my legs'
Bottom line: Strictly speaking, inapplicable, I think.

**Dehu** [dhv] (Tryon 1967a)

**Reflexivisation:**

p76: In reflexive predicates, the direct object is omitted.
Presumably valency decreasing.
(Very brief mention.)

**Passivisation:**

p19: There is a passive.
p35: Passive clauses are treated as a separate class of verbal types. It's further divided into the passive single transitive clause type and the passive double transitive clause type.
p38 onwards: Passives are the "passive transforms" of active declaratives. The active single transitive declarative clause type has "one passive transform", the active double transitive declarative has "two passive transforms".

Thus the passive single transitive declarative is the transform of the active single transitive declarative (by "reversal of tagmeme order") and the passive double transitive declarative is the transform of active double transitive declarative.
Meanwhile passiveness is treated as a single tagmeme that's part of the verb, glossed PASS.
p50: "Note that with Present and Future Tenses there is no obligatory nucleus passive tagmeme, passivity being indicated solely by the use of an obligatory agent tagmeme plus tagmeme ordering."
There is a form of the passive that requires an agentive argument. (There's also a form that doesn't.) (But I'm pretty sure those don't correspond to the single and double distinction.)
p55: In active sentences (except impersonals) the subject comes before everything else. In passives it goes immediately after the predicate.

[That's curious. Could it also be PART of the predicate? Then maybe it's just an object that's not promoted to the subject position.]

p74: The "direct object tagmeme" (the logical object) is the "alternate obligatory Nucleus to the Passive Double Transitive Clause Type 5". (Since it's a passive, it should be the subject here.)
p78: The "indirect object tagmeme" is "obligatory and Nucleus to (...) the Passive Double Transitive Clause Type 6".
Bottom line: Whatever is going on here, it's not simply a verb affix. It seems to be a syntactic transformation.

**Diyari** [dif] (Austin 1981)

**Reflexivisation:**

p152: Verb affix *-tadi-*. This morpheme derives reflexive meaning with transitive stems of one class and with ditransitives, and anti-passive or passive meaning with those of other classes, as well as a durative aspectual reading with reduplicated stems.

p75: Detransitivises the verb.
Refl can occur with body part noun object or without object.

Additionally there's an emphatic noun *munta* "self" that can be used to emphasise reflexitivity, but still only in combination with the *-tadi-* refl affix. *Munta* also occurs without refl affix, but then it's not a reflexive. (As in (347) "He ate it himself.")
Also works with ditransitives. (Of course.)

**Passivisation:**

p76: "[A]dded to a class 2D transitive root, '-tadi-' derives an intransitive stem with passive meaning."

Side note: the same affix is used for reflexivisation.

Verb-affixal passivisation strategy.

**Ndjébbana** [djj] (Handbook of Australian Languages, vol 5)

**Reflexivisation:**

p290: Refl/recip/intransitiviser suffix *-yi-*.
Verb behaves like any intransitive verb wrt "the use of independent nominals and pronouns and (...) of adverbs and so on".
p263: "unclear" how productive this suffix is. (As an intransiviser or in general?)
Further proof of decreased valency: prefixes with a transitive and an intransitive form must show up in the intransitive form with this suffix.
p265/265: ambiguity for plural subjects; can mean "themselves" or "each other", OR BOTH at the same time.

**Passivisation:**

p265: Intransitivising suffix '-yi' "converts the O of the base transitive verb into the S of the derived intransitive, simply omitting the A of the base transitive verb from the pronominal prefix complex of the derived intransitive verb in the process (...) In some cases the English passive provides a good comparison in this respect."

Comparison? It sounds like the exact same thing.

"Note that this intransitivising use of the reflexive suffix syntactically parallels the English passive (...)"

Well, by my definition, and for all my intents and purposes, this is a passive.
Bottom line: verb-affixal strategy. With the reflexive affix.

**Djabugay** [dyy] (Handbook of Australian Languages, vol 4)

**Reflexivisation:**

p276: A reflexive pronoun that takes on the direct object role: *ngayany* "self".
Identical for all persons.
p300: Verb remains just a transitive verb, unmarked.
That's only for deliberate predicates. For accidental refls, verb gets affix *-yi-*, A is deleted and O remains. No reflexive pronoun is used.
p297: *-yi-* intransitivises the verb.
It's quite more versatile than just an accidental affix. It's also used for antipassives and for ongoing non-discrete actions or states. There's some room for ambiguity, but context helps resolve that.

**Passivisation:**

p280 has example (43) translated with a passive, "[t]he fish has been cut up into small pieces". Original has object but no subject and verb stem reduplication.

p282: reduplication indicates repeated, ongoing or habitual action. (If (43) is a passive, the passivity is not in the redupled stem.)

"Fish" is marked with +O for "transitive object". That means it's an object, and the verb is transitive.

Not passive.

p290: "The presence of core constituents and their order depends largely on the speech context in which a sentence is uttered." Arguments can be omitted if they're understood, where in English we'd use pronouns or deictics.

p298: Intransitivising suffix '-yi' can give a predicate a "'passive' flavour (...) in the assignment of different degrees of prominence to the participants."

Active participant does NOT seem to become optional; still has ergative case, and the logical object still has -O suffix.

Not a passive proper.

p299/300: (109) gives a passive with logical object in S case (ergo intransitive predicate) and optional logical subject. Brought on by the same intransitivisation suffix '-yi'.

Indicating an ongoing state or process.

So the same sentence can be passive or antipassive ("he is beating up [something]" or "he is being beaten up") but context normally disambiguates. Or the speaker can add a disambiguating comment.

Can also be used for already intransitive verbs.

Debatable whether this is a passive, but it fits my definition.

Bottom line: verbal-affixal strategy.

**Gaagudju** [gbu] (Harvey 1993)

**Reflexivisation:**

gaagudju_harvey_s.pdf p231[16]: "The intransitivisers signal a variety of reductions from full transitivity (Hopper & Thompson 1980) - middle, passive, reciprocal, and reflexive meanings."

So reflexivisation decreases valency. Somehow.

gaadudju_harvey1992_s.pdf p452: "There are no alternative constructions to the detransitivisers for conveying reflexive and reciprocal meanings."

Well, whatever the form is, this is detransitivisation. That means there's no problem to the working hypothesis.

**Passivisation:**

p353: "The term detransitivisation refers to the middle, passive, reflexive and reciprocal interpretations of transitive verbs."

p354: "The middle and passive meanings may also be conveyed by a construction which is formally marked as having an Augmented 3rd person Subject, but where the Subject is in fact indefinite or nonreferential in meaning."

Detransitivisation is accomplished by means of a verb affix.

**Gumawana** [gvs] (Olson 1992)

**Reflexivisation:**

p338: For intentional reflexives, they just use coreference of the pronominal verb affixes for subject and object.

[16] Appendix note: I've looked at two digital versions of the same book. Page numbers may not be reliable.

[Coreference refl. But intentional actions are necessarily agentive, yes?]
p277: For unintentional refls, there's a (stand-alone) refl pronoun, 'toini'. Requires phi-feature suffixes that agree with those on the verb.
'Toini' is often used with verbs taking the prefix 'ta-', which "appears to indicate that the initial DO is in a particular state." (p274)
(Actually judging from the only example given, I think it looks more like a middle.)
This language uses V(x) and V(xf(x)).

**Passivisation:**

p296: There is a "passive alienable possessive marker", 'a-'.

"This kind of construction is used, like passive constructions in many languages, where the agent is unspecified."

It seems to be considered a transformation from a regular transitive, where the object becomes a subject. AND there seems to be no agentive core participant.
On the other hand, this passive does not seem to be a regular intransitive declarative sentence. It's a nominalisation morpheme.
Syntactically speaking the result is a DP involving a possessor; example (17) on p312 has 'PASS-2SG-lie' translated as "your lie (which was told to you)" which is somehow equivalent to "someone lied to you".

More like "your being lied to". In English the passive and the nominalisation are separate, but the end product is still passive.

It also seems this DP can be a felicitous sentence in its own right.

There's a verb that gets a morpheme that takes away the agentive theta role. The verb doesn't remain a verb, but does it have to in order to be a "passive"?
Bottom line: Less than unequivocal, but I'm going to count this as a verb affix passive.

**Ilocano** [ilo] (Rubino 1997)

**Reflexivisation:**

p454: There are reflexive pronouns, which are identical to so-called 'bagi'-possessive pronouns, incorporating the root "bagi" meaning "body".
No dedicated refl strategies.
p117: Bagi-pronouns form one of two series of possessive pronouns, the other being 'kukua-' pronouns. Both 'bagi-' and 'kukua-' are stems to be combined with a suffix indicating person and number.
(Reminiscent of the Utrecht area dialectal reflexive 'je eigen' "your own".)
p454: Bagi-possessives are always used in absolutive case, and so are refl pronouns usually, but if the verb is intransitive in an "identificational" construction, the refl pronoun must be in oblique case. (It seems this "identificational" construction involves the verb being intransitive despite retaining a transitive meaning.)
p455: Refl pronouns can also be used with NPs instead of verbs: "Datayo ti timek ti bagbagitayo." 'We are our own voice.'
In conclusion, this seems like the V(xf(x)) strategy.

**Passivisation:** N/A

p135: Verb affixes 'ma- -an' (glossed INVOL- and -T) create sentences that "would correspond to passive verbs without the expression of an agent".

p243: "Ma- verbs that take absolutive arguments or pronouns to refer to the entity that undergoes or receives an action are not truly passives, as the agentive argument is not encoded in the oblique case: the agentive argument takes ergative case marking"
p249: On ma- -an constructions again: "Notice how the affected argument is encoded in the absolutive case, similar to the English passive construction."
p250: "Unlike the prototypical passive construction where the agent, if expressed, takes oblique case marking, the agentive arguments of ma- -an verbs take core case marking in the ergative case"

And yet they're non-obligatory.

p251: "Certainly, not all ma- -an verbs appear in passive-type constructions where the affected patient is encoded in the absolutive case, and the agent is unexpressed."
p450: Ilocano can leave out the agentive argument in a transitive, but "does not have a passive construction to suit this purpose."
Bottom line: N/A. Ma- -an verbs are much like passives, but not in the aspects that matter. (Agentive theta role is still there.)

**Bahasa Indonesia** [ind] (Kana 1986)

**Reflexivisation:**

p29: "Direct objects are reflexivised with the reflexive pronoun 'diri' "self", or 'diri' + possessive, usually followed by the emphatic 'sendiri' "oneself".
p30: The object of a reflexive benefactive (like "he bought shoes for himself") can consist of a personal pronoun followed by 'sendiri', or it can be a 'diri' reflexive. A reflexive direct object can only be a 'diri' reflexive.
Either approach seems to be V(xf(x)).

**Passivisation:**

p31: "Bahasa Indonesia has a passive, which is often indicated on the verb by the prefix *di-*."
p104: The author argues that these passives are derived from active counterparts "by advancement of the direct object to subject". (Like in English.)
p105/...: Examples (17a), (23a) have no agentive participant.

Can core arguments be omitted?

No confirmation found, so probably not.

Bottom line: Verb-affixal passivisation.

Addenda (Sie 1989):

This book is called “The syntactic passive in Bahasa Indonesia”. Presumably there is at least arguably an additional, syntactic passive in this language.
p44: There’s another passive affix *ter-*, which is called the Perfective Passive Aspect. It’s a passive in the perfect tense, for a completed action. An agent is normally missing, but can be added in a PP.
p47: Another passive: *ke- -an* forms (*ke*-stem-*an*).

Interchangeable with *ter-* passive in (36)

Agent optional; seemingly not in a PP

Some *ke- -an* forms have active counterparts (marked by *meng- -i*), others don’t.

p48: There’s an *auxiliary* passive too! It’s formed with the auxiliary *kena* (“to be struck, to be hit”), followed by a verb.

Used sort of metaphorically; people can be ‘hit’ literally by a bomb or a disease, or in this passive also non-literally by ‘abusing’ or ‘deceiving’ (i.e. being abused or deceived).

Author mentions Fokker (1951) who says this “has lost its original meaning” and can now be thought of as “a kind of” verb prefix rather than an auxiliary. Still in the literal sense it’s clearly an aux…

p49: (42) has a minimal pair (/triplet) of one passive meaning encoded with all passivisation methods except *ke- -an*.

New bottom line: There are three verb-affixal passives, and one auxiliary passive – which can in theory also be analysed as a verb affix, says Fokker (1951).

**Da’a** [kzf] (Barr 1988)

**Reflexivisation:**

p13: "(...) several ASPECTS are marked by inflectional [verbal] affixes. These Aspects are: Reciprocal and Multiple Actors (si); (...) Reflexive (notiN/motiN) (...)"

p35: 'notiN-' is the "realis" version and 'motiN-' the "irrealis" version.

These prefixes are affixed to "Derived Affective" stems only. (They combine with a prefix 'ka-' and become 'notingga-' and 'motingga-'.)

Is that V(x)?

p36: "It should be noted that this is not the only strategy in Da'a for indicating [reflexivity]. One can also use the pattern: agent-verb-body-his own". (His body.)

Example (137) is glossed: 'person that AF,REAL-hit body-his own' "That person hit himself."

Arguably that's not reflexivity proper, that's just a regular transitive [V(xy)]. 'He hit his own body.'

"(...) what classes of verbs can be made reflexive by affixation and what classes use the second strategy noted above." The author seems to believe any verb uses either one strategy or the other.

So there's verb inflection [presumably detransitivising; V(x)] and there's a body part strategy [V(xy)].

**Passivisation:**

p35: There's a non-volitional passive construction marked by a verb prefix; 'nati-' for realis and 'mati-' for irrealis.

"What is expressed is a kind of passive participle that emphasises the resultant state, not the event."

"There is no actor included."

Not all examples are translated as passives, though it's conceivable they are passives in Da'a.

p88/89: Passives are used in this lang.

"In such situations where the actor is unspecifiable, Da'a uses, logically, G-Foc forms."

What does G-Foc stand for, then? G... something... focus?

The G presumably stands for a participant. (The other foc-morphemes indicate focus on agent and objects and stuff. )

At any rate it's expressed with a verb prefix 'ni-'.

On p3 'ni-' is glossed OF instead, Object Focus. Same author, different publication.
Bottom line: Verb affixes.

**Lau** [llu] (Ivens 1921)

**Reflexivisation:**

p17: "The word *mara* with suffixed pronoun is used to denote reflexive action: *nia saungia marana*. It also carries the meaning self, of one's own accord"
Context wrt what this "word" is: p15: "Almost any word may be used as a verb by prefixing the verbal particles, but some words are naturally verbs as being the names of actions and not of things. There are also verbs which have special forms as such by means of a prefix or termination."
Suggests that this "word" is not necessarily a verb, but can be used as a verb.
p57: "Mara-" is listed in the vocabulary section as a "noun", and meaning "of one's own accord, alone".
p12: "Mara" is one of a number of "words (...) which show a noun termination but which have no independent existence as nouns"
Perhaps "mara" is much like English "self", which needs a pronoun to be usable.
The strategy is probably V(xf(x)).

**Passivisation:**

p17: "Passive: The passive is expressed by the use of the personal pronoun plural third *gera* or *da*, with the verb and the adverb *na* already: *gera taufia na* it has been washed; *gera* and *da* are used impersonally. The word *saetana* it is said, *sae* to say, is used as a passive: *se doo saetana* the thing said, *si baela ne saetana uri* the word which was said."

I see. Saetana = Sae+da+na?

So passivity is indicated by a pronoun and an adverb. (Which, it seems, can end up lexically incorporated into the verb, but don't have to. I also think even in the case of saetana they're not verb affixes, but part of the stem. Probably.)

**Lewo** [lww] (Early 1994)

**Reflexivisation:**

p314: "Lewo does not have a special morphological marker or syntactic construction for expressing the semantic categories of reciprocal or reflexive"
"Two devices Lewo employs for expressing reflexive meaning are the use of independent person pronouns as objects, rather than object person suffixes, combined with the use of the modifier 'si' "again" (...)."
p251: 'si' is also used for reciprocals.
p252: Equivalent of "they hit them" is described as "triply ambiguous"; "them" could be another group, or it could be the same group, reflexively or reciprocally (where reciprocal can furthermore be "either others and self, or others only"). (More vagueness than ambiguity proper; referent is just unspecified, it seems.)
'Si' disambiguates; with singular subject refl reading is enforced. Often the "limiter" 'ga' is also involved.
With plural subjects the ambiguity/vagueness is just limited to refl/recip, and context has to determine which is it.

This looks like V(xf(x)) again. (The object used for refls is more marked than a regular object.)

**Passivisation:** N/A

p323: "Many languages have a passive construction which enables situations to be described without entailing clear specification of who or what was the volitional agency of the action. Lewo frequently accomplishes the same effect by leaving the subject unspecified (no nominal or pronominal filler of the S slot), and using the third person plural subject person prefix on the verb, even where the understood agent is singular (eg. God, in the next example)."

Which is not a passive construction.

p79: "There are no morphological derivational processes for rearranging grammatical roles, like passivisation"

**Buru** [mhs] (Grimes 1991)

**Reflexivisation:**

p161: Three adverbs that indicate reflexive reading:

'emsikan' "by oneself (without others' company)"

'emhewak' "by oneself (without others' assistance)"

'benima(-k)' "very own (a unique relationship excluding others)"

Examples with each translate respectively to "He beat himself (unassisted)", "He beat himself (nobody else involved)" and "He beat himself (and nobody else)".

Multi-functional; not restricted to indicating reflexivity proper

p161: "Distributionally, these forms may modify either nominals or verbals, or may be used as the main verb."

p162: no condition B; equivalent of "he beat him" is ambiguous between coreference (reflexivity) and separate reference. Refl adverbs serve to disambiguate.

Object can be omitted, but then the reflexivity is unspecified (because the adverbs are not dedicated reflexivisers); (60) "da iata emhewak" and "da iata emsikan" both translate to "he cut by himself", where the thing that is cut could be anything, including the subject himself. (These adverbs can also be used with intransitives, with no refl meaning.)

"Emhewak" can also be a verb, translated in example (65) as "he by-himselfed his house (i.e. made it unassisted)."

So in each of these constructions there's a non-dedicatedly reflexivising adverb, while the arguments are just represented as in regular transitives.

Addendum wrt object omission with no reflexivising adverb:

p355: Objects can also be omitted without any reflexivising adverbs.

p163: (66) also has an omitted object and no adverb, and is dubbed "implied reflexive", though the verb used is "to bathe" which may well be lexically reflexive. Examples of object omission on p355 have different implications, with understood objects.

I'd conclude that when the object is omitted and there's none of the adverbs present, the reading is also optionally reflexive.

Addendum wrt the transitivity of objectless sentences:

p356: Judging from their meaning, they're definitely still transitive. Usually when an object is omitted, its referent is (expected to be) understood. (See examples (39) and (40).)

**Passivisation:**

p60: There are verb prefixes that function as "passive causative (agentive passive)" (ek-) and "middle passive (agentless passive)" (eg-).
p116: "The prefix ek- indicates there is a volitional Actor (agent), but that Actor is not the Subject. The Subject is the Undergoer which has been syntactically promoted from the postverbal core argument to the pre-verbal core argument."
Agentive argument is not usually overtly expressed, but is implicitly understood(/assumed) to be there.
p118: "The prefix eg- indicates there is not a volitional agent involved and that the Actor is unimportant."
p361: "For some verbs of destruction, eb- forms the passive counterpart [+voice] to the causative ep-, indicating the state resulting from the action."
Bottom line: Passives are formed by (four different) verb affixes.

**Maori** [mri] (Pucilowski 2006; Bauer 1993)

**Reflexivisation:**

p70: "Maori does not have special reflexive pronouns, rather reflexivity is expressed by ordinary non-reflexive pronouns with or without a support form anö ‘again’ or (an)ake ‘only’."
[Coreference refl. Usage for non-lexical refls inconclusive.]
Support forms are used for disambiguation when needed. (This is common; a reflexivity-emphasis adverb with a meaning along the lines of "alone".)
"Bauer (1997) (...) notes (...) that the binder must normally precede the bindee in order for the reflexive interpretation to be unambiguous (Bauer 1997: 637)"
Reminiscent of Buru [mhs]?
(This is an MA thesis about ergativity. Reflexivity is mentioned in passing.)

Addendum (Bauer 1993):

p152 confirms: "There are no reflexive pronouns in Maori, although 'anoo' "again" can be added to personal pronouns to serve this purpose (...) It can also be added to non-pronominal NPs (...) 'Anake' "alone", "only" is in some environments an alternative to 'anoo'."
p155 mentions "the reflexive particles" (presumably thus referring to the above).
p165: "Since anaphora and reflexivity are not clearly distinguished"
p168: "It appears that, without the support form, the sentence is ambiguous between a reflexive and a non-reflexive reading." (Said of example (681) "Mary washed herself".)
p177 (among others): The "support" form is actually sometimes obligatory.
p185: "Reflexive pronouns" (i.e. pronouns with a support form, I presume) can be used as emphatic pronouns too.
p271: "only canonical transitives with 'i' are normally read as reflexive without 'anoo' support.

**Passivisation:**

p1: "The so-called passive in Maori" is "an atypical passive."
This paper asserts that this is not a passive, but an ergative; the "active" counterpart is the accusative version. (Meaning Maori has split-ergativity.)
p10: "The agent argument is omitted just as often in the active pattern as it is in the passive construction."

So is the external theta role gone in both cases, or is either or both a case of simple PF omission (null subjects)?
I think I need to consult another grammar.

Addenda from Bauer 1993:
p396: "There is general agreement that Maori has a passive (...) These two [example] sentences would suggest that the passive in Maori is essentially the same as the passive in, say, English: the underlying DO of the active becomes the subject in the passive (it has Ø marking); the subject of the active becomes an oblique NP (marked with the preposition 'e'); the verb in the passive sentence acquires a suffix."
p404: Logical subject can optionally be expressed in a passive.
"It is normally expressed in a prepositional phrase with the preposition 'e'."
p405: "It should perhaps be noted that 'e' is occasionally used in sentences with no other indication of passivity". But in the example given, it's used for an adjunct.
Botom line: IF this is really a proper passive, this language uses the verb affixal passivisation strategy.
Apparently the jury's still out on the 'if' part. Noted. I think I can risk working on the assumption that it is, though.

**Nengone** [nen] (Tryon 1967b)

**Reflexivisation:**
p67: "The Reflexive Pronoun Phrase is composed of an obligatory Nucleus Personal Pronoun, plus an obligatory Nucleus Reflexive particle ko."
This must be the V(xf(x)) strategy.

**Passivisation:**
pv: Like Dehu (same author), we have "passive single/double transitive declarative clauses" here.
p51: "In the Active Clause Types, the Subject tagmeme has the function of Performer of the Action, while in Passive Clause Types its function is that of Undergoer of the Action."
*** On agents:
p37: These passives have "an obligatory Nucleus Agent tagmeme."

If there has to be an agent argument, that means it's not a passive proper. (Is this an argument?)
p46: This is what distinguishes them from the actives, actually.
p72: The agent may be obligatory, but it seems to take on the shape of a PP, equivalent to "by Mary" (or "by the sun"). That implies it's an adjunct rather than an argument.
Section bottom line: I do think this counts as a passive proper.
*** On the passivisation method:
p34: There's also talk of a "passive transform" again here.
p85: "Several Nouns are formed by a combination of *na* (Passive Marker) and a Verb or Common Noun." Examples: to stay/house, fire/fireplace, to excrete/excrement

Yeah, that's probably not what we're looking for.
p38: For the double version, there's a "distinctive order" for its obligatory nucleus tagmemes.
Section bottom line: Presumably the syntactic strategy again. At any rate probably not a verb affix.

**Nyangumarta** [nna] (Sharp 2004)

**Reflexivisation:**

p252: An affix to a "verbal pronoun", *-rninyi*. (Refl & recip in one form.)
"Verbal pronouns" are indeed pronoun-like affixes to the verb. In third person singular, there isn't any; in other persons and numbers there is.
Seems to derive from *rni* (1SG.SUB) + *nyi* (1SG.OBJ). ("I-me"?)
There's one form for direct and one for indirect objects. Only the former is a reflexive proper in the sense we're interested in. (The other is again more like "for himself" and stuff.)
Again it's the V(xf(x)) approach, I guess.

**Passivisation:** N/A

p9: "Some Ngayarda languages (e.g. Ngarluma, Yindjibarndi and Martuthunira) have active/passive voice distinction; Marrngu languages do not."

Nyangumarta is a Marrngu language, according to Ethnologue.
N/A.

**Panyjima** [pnw] (Handbook of Australian Languages, vol 4)

**Reflexivisation:**

A pronominal enclitic on the verb, *-pula*.

(Very terse description.)

Presumably the pronominal strategy, then.
Possible etymology: identical in form to a suffix meaning "both".

There's also a general dual suffix, but this one emphasises a shared property.
Cognate with 3rd person dual pronoun enclitic in other Western Australian languages.

**Passivisation:** !

p173: There's a "passive perfect" inflection. A verb affix that indicates passivity, in the perfect tense (something that "has been done").
Agent is often not specified and there is often no understood agent either.
p175: There are also an active and a passive "might" inflection (i.e. potential mood). Also a verb affix.
p177: There's a passive affix.
"(...) the passive is identical in form to the psych-inchoative, though no historical connection between the two (...) has yet been demonstrated."
p192: Passive is "fully productive on verbs which ordinarily have one or more accusative arguments"

(Wait, what? More than one accusative argument? He's probably talking about ditransitives, but do those have two arguments in the accusative case here?) (Irrelevant to my purposes.)

(p193 (213a): So it seems. A ditransitive with two ACC-marked objects. Interesting.)

"Passives are reasonably rare." 4% passives in a sample of ~1000 clauses.
One object is promoted to NOM subject; if any, the other object remains an accusative object. Agent appears in passive marked with agentive suffix.

Unknown if the agent can be omitted.

**Rapa Nui** [rap] (Du Feu 1996)

**Reflexivisation:**

p96-8: No reflexive pronouns. However there's an emphatic demonstrative "a' that is placed after a personal pronoun (object?) to effect a reflexive reading.
Looks like V(xf(x)).
(Rapanui glosses are Very Difficult to read.)

**Passivisation:** N/A

p150: "Rapanui does not have voice distinctions, although historically agentive 'e' is passive."

**Samoan** [smo] (Mosel & Hovdhaugen 1992)

**Reflexivisation:**

p726: Samoan does not have "derived reflexive verbs or reflexive constructions on clause level"
Instead, the language uses:

1. Non-ergative verbs for reflexive predicates involving the whole body or person (e.g. washing oneself, killing oneself)

2. Labile causative verbs (which are derived from non-ergative verbs by a prefix) in non-ergative constructions for reflexively-causative otherwise non-reflexive predicates (like causing yourself to jump, or whatever)

3. "VP-ABS+POSS constructions" (VPs with absolutive objects and a possessor added) for reflexive predicates involving only the body, or part of the body or person. (I.e. predicates where the subject affects some inalienable possession of themselves.) The object is expressed in absolutive case, and the logical subject (the agent) is expressed as its possessor.

Think of "shaved the chin of John." (I'd speculate "John" would be represented twice, as a covert subject and as the possessor, to get both the possessor and agent theta roles right.)

(4. Other expressions, for translations of actions that are idiomatically expressed with a reflexive in English but not in Samoan. Including "he killed him.")

**Passivisation:** N/A

p104: "Ergative verbs do not distinguish between active and passive voice."
P702 and 722: There are clauses that are *like* English passives...
p773: "There is no voice distinction, i.e. no antipassive or passive."
p730: "(...) there is no valency-decreasing device in Samoan such as passivisation in English (...)"

**Sangirese** [sxn] (Adriani 1893)

**Reflexivisation:**

p250: Equivalent of refl pronoun is 'batangeng' "oneself".
Stem 'Batang' means "fallen tree; lying tree trunk". In several Indonesian languages the word for "tree trunk" is also used for "body", suggesting a body part noun origin.
Pronominal suffixes can be adjoined to 'batangeng' to form an equivalent of "myself", "yourself", "himself", etc. ("Literally 'his own'.") Not obligatory, and usually not necessary.
Seems quite an unequivocal case of V(xf(x)).

(Note: This grammar is in (rather archaic) Dutch.)

**Passivisation:**

p189: "Er zijn drie soorten van Passief."

First is "simple passive", which is prefixal.

Example translates more literally to "the being brought of the slave".

Agent optional; if used, introduced by a genitive particle.

Second is "local passive", which is suffixal. Also applied to nouns only (including verb turned into nouns by the simple passive).

The meaning is locative; indicating the place of the action, or the time, goal, benefactive person, etc.

Third is "subjective passive", which includes a pronoun.

Indistinguishable from 1st and 2nd passive except in the singular; there, the stem can take a pronoun as an affix.

Note: The above is from the chapter about verbs.

*** On whether these affixal strategies apply to nouns or verbs:

I have the impression they *apply* to verbs to *yield* nouns.

One bit of evidence for this is that they're described in the chapter on verbs.

Another bit is the translations of the examples; "the being brought of the slave." In Dutch (the language the book is written in) it's a nominalised verb, and it's given as a literal translation.

No glosses. Too bad.

The separation between nouns and verbs in this language seems solid enough, or at least that's an assumption the author seems to be operating on. (This grammar is very old, after all.)

Bottom line: Verb affixes, but yielding *nominal* passives. External theta role goes away.

**Kuuk Thaayorre** [thd] (Gaby 2006)

**Reflexivisation:**

p88: There are reflexive pronouns.

"The reflexive pronominal forms are formally very close to compounds of the corresponding possessive pronouns and nominative cardinal pronouns."

p410: There is ALSO a reflexivising morpheme '-e', which can apparently be suffixed to verbs as well as to nouns. This morpheme is "highly polysemous"; has many meanings.

p224: Apparently there's a "pronominal reflexive construction" in this language with a refl pronoun but no refl verb affix, there's a "verbal reflexive construction" with a refl verb affix but no refl pronoun, and there's a construction with both.

"(...) clauses expressing oblique reflexivity (i.e. where some oblique role - such as Beneficiary, Location, Source, etc. - is ascribed to the subject participant in addition to the Actor role) are not marked by the reflexive verbal suffix (since the subject participant is not an Undergoer), but are almost always marked by the reflexive pronoun."

So whether there's a refl verb affix depends on the theta-roles/semantics.

Well, the pronominal construction is straightforward enough, I'd say. Just V(xf(x)) again. But does the verbal construction decrease valency? (After all, it can be combined with a refl pronoun, so there's a place for an argument...)

p504-505: "Although this conjugation class is primarily associated with intransitive verbs, the verbal reflexive construction is somewhat ambivalent with respect to transitivity. Oftentimes, as in example (653) above, the subject of the verbal reflexive clause is in unmarked Nominative case, signalling that the clause is intransitive. Other verbal reflexive clauses, however, contain an Ergative-marked subject. This is particularly common where the subject is acting upon a part of themself, where this part is encoded as an accusative direct object. Such clauses (e.g. 856) appear to be straightforwardly transitive"

Reminiscent of Warlpiri [wpb] but apparently more straightforward.

Well, that's it, then. The refl verb affix either decreases the valency by one, or the valency remains the same and is satisfied by a body part nominal or somesuch.

**ADDENDUM:** À propos of "cardinal pronouns":

p86: It seems that "cardinal pronouns" are just regular pronouns; that is, pronouns like "I" and "you", as opposed to possessive pronouns, reflexive pronouns, et cetera.

They certainly aren't defined as morphologically free pronouns:

"Nominative and accusative (and, marginally, dative) cardinal pronouns possess alternative enclitic forms that attach to a variety of word classes, usually the verb."

They're glossed and translated like regular pronouns too.

So then the presumable etymology of the reflexive pronouns is along the lines of "my-I".

**Passivisation:** N/A

p450: "(since Kuuk Thaayorre possesses no passive construction)"

**Tiwi** [tiw] (Osborne 1974; Plassais 1999; Lee 1987)

**Reflexivisation:**

Osborne p56: A reflexive affix on a pronoun.

Lee p111: On an empathic pronoun, to be precise.

"These suffixes may also occur on verbs (...) and on the adverb, **wangata** *alone*."

In traditional Tiwi, Verb affixation seems more common for regular reflexives; much like the other languages where refls are formed by a detransitivising affix on the verb. The pronoun affixation thing is more like "by myself" or "for myself". Not relevant to our interests.

"The semantic notions covered by these suffixes are wider than just 'reflexive' and 'reciprocal'"

In modern Tiwi, the refl pronoun strategy is used. (Perhaps not exclusively. Unknown.)

**Passivisation:** N/A

Plassais 1999:

p385 remarks that the distinction of voice into "active" and "passive" is not sufficient for Tiwi.

There are four voices: refl, recip (are those *voices*?), collective and causative.

No other mention of passives.

Osborne 1974:

Confirms: four voices; refl, recip, collective and causative.

No mention of passives. (Although this is not a searchable document, this is the section about verb voice, and if it's not in here I doubt it's anywhere else.)

Probably N/A.

**Wangkangurru** [wgg] (Hercus 1994)

**Reflexivisation:**

(Reflexive is (all but?) identical to Arabana; reciprocal is not.)
p152: Reciprocal and reflexive are "closely connected"
Both formed with a detransitivising suffix. (Reflexive: *-nta*)
Reciprocal requires a composite suffix including the refl suffix: *-la-mintya-nta* [benefactive-each_other-refl]. (Where -nta can also be a "speed" marker.)
Some verbs are lexically reciprocal, or have irregular stems just for the reciprocal.

**Passivisation:**

See **Arabana** [ard].

**Waluwara** [wrb] (Breen 1971)

**Reflexivisation:**

p175: This language reflexivises by means of a suffix to a pronoun.
Argument dropping seems to be possible in Waluwara, but there *must* be an overt reflexive pronoun in a reflexive sentence.
This seems much like English' "self" strategy. Turning V(xx) into V(xf(x)).

**Passivisation:** N/A

p3: Waluwara has no passive voice.

**Warray** [wrz] (Harvey 1990)

**Reflexivisation:**

p165: Again, a verbal affix that detransitivises the verb.

(Interestingly and I think correctly, this author points to a distinction between intransitivising (rendering intransitive) and detransitivising (presumably decreasing valency by one).)

With pro-drop.

**Passivisation:** N/A

p165: Passives are made by valency reduction ("detransitivisation").
"The reflexive suffix *-yi-yn* is the unmarked detransitiviser in Warray. It also marks middle and passive meanings (...) but is most commonly found with a reflexive meaning."
p167: "The coding of passive depends on the position in the animacy hierachy of the patient/theme Object. If the patient/theme Object is human then the passive meaning will be coded by the appearance of a specific Indefinite Subject "someone" (identical to the 3plS form 4.4)"

These "passives" translate literally to e.g. "someone could have hit him" rather than "he could have been hit." This is not a passive proper.
"If the Object is lower on the animacy hierarchy then this construction may be used."

"This construction" being a prefix glossed "indefS", presumably [0.78] meaning "indefinite subject", meaning the subject is still represented as a core argument, meaning this is not a passive proper either.
"A "false" reflexive construction may also be used, though this is uncommon."

This is the -yi-yn suffix mentioned earlier. THIS is a properly detransitivised passive. Although since the refl suffix is used, the theta roles are presumably bundled, instead of one of them being booted out. So then it's STILL not a proper passive.
"If the patient/theme involves a part/whole relationship then there is no overt marking of passive meaning."

And then the example can translate either to "my hand is cut" or "he cut my hand". "As there is no requirement for overt nominal expression of the Subject in Warray 15 may have either of the interpretations indicated."
Bottom line: No passive in this language according to my working definition of "passive".

**Ngiyambaa** (dialect of [wyb]) (Donaldson 1980)

**Reflexivisation:**

p166: verb affix *-DHili-y* that renders the verb intransitive.
Different affix for the reciprocal this time.

**Passivisation:**

p169: Example (6-31): 'you+NOM spear-INTR-IRR spear-INST' "You will get (yourself) speared by a spear."

Object of transitive becomes subject of detransitivised counterpart, and agent cannot be overtly represented. (Valency is decreased; external role is taken away.)

That means it's a passive, yes?

Could also be used for middle, anticausative, etc... but if there's anything that can be called a passive, this must be it.
Nothing else found.
Bottom line: I say this counts as a verb-affixal passivisation strategy.

**Malagasy** [macrolanguage] (Pearson 2001)

**Reflexivisation:**

p50 mentions a "reflexive anaphor 'tena'".
p100: "Reflexive anaphors in Malagasy are built from the noun tena (lit. “body”). In certain contexts, tena may be used by itself as a ‘bare’ NP with reflexive meaning (38a). In other cases, the reflexive takes the form 'ny tenany' “his/herself” (38b). The distributional properties of 'tena' and 'ny tenany' are poorly understood."
At any rate, looks like V(xf(x)).
Note: There are ten different languages called "Malagasy" in this branch. Furthermore the document I'm using is not an impartial and complete grammar, but an argument that just mentions the relevant subject once or twice.
In other words, perhaps this entry should be disregarded.

**Passivisation:** N/A

p27: "Although forms such as the AccP and DatP are functionally similar to passives in English and French, in that the patient is ‘promoted’ over the agent to the structurally and pragmatically salient EA role, syntactically the two constructions are quite distinct. (...) the ‘demoted’ agent in an AccP clause does not function as an oblique comparable to the by-phrase in English passives, but as a core argument of the verb which behaves in all important respects like the postverbal subject in a VSO language. Moreover (...) the

‘promoted’ patient in an AccP clause does not have the properties of a derived subject, but functions more like a topic (...)"

By my definition below, these are not passives.

If this is the closest thing to a passive construction, N/A.