

Chapter 1

Introduction: reciprocals and semantic typology

Nicholas Evans

Australian National University

nicholas.evans@anu.edu.au

Stephen C. Levinson

Max Planck Institute for Psycholinguistics

Stephen.Levinson@mpi.nl

Alice Gaby

University of California at Berkeley

agaby@berkeley.edu

Asifa Majid

Max Planck Institute for Psycholinguistics

Asifa.Majid@mpi.nl

Author's contact details:

Nicholas Evans

Linguistics, College of Asia and the Pacific

Australian National University

Fax:

ABSTRACT

To write.

子贡问曰：
有一言而可以终身行之乎？
子曰：
其恕乎！
己所不欲，勿施于人

Confucius, Analects, Chapter 15

A disciple of Confucius enquired:
“Is there one word which may guide one in
practice throughout the whole of life?”
Confucius answered,
“The word 恕 [*shù* ‘reciprocity’]¹ is perhaps
the word. What you do not wish others to do
onto you, do not do unto them.”
[Transl. Ku 1976:138]

Reciprocity is recognised as fundamental to human society and morality by religions and ethical philosophies around the world. The evolution of complex societies in our own species – and some others – has been widely argued by evolutionary biologists to depend on reasoning about reciprocal obligations and the taking of reciprocal perspectives. Less nobly, all sorts of interactions and escalations in social behaviour involve activities that require the more or less reciprocally-directed activities of both parties. In fact, reciprocal activities occupy much of the narratives that interest us most in novels, films and soap operas, from courtship through marriage to divorce, from meeting through exchanging to fighting.

But to represent or reason about such activities and principles in any complex and accurate way we need linguistic devices to represent them. The majority of languages include special constructions for representing reciprocity, such as the *each other / one another* construction in English (more on the cross-linguistic figures shortly). It is a cross-linguistic comparison of the meanings of such constructions that forms the central theme of this book, based on a sample of 20 languages (16 represented by individual chapters, and 4 more fed into the multivariate analysis outlined in Chapter Two). Our sample of languages spans every continent and makes sure to include one sign language, to pick up on possible modality-specific effects. There is a skewing towards the languages of the Western Pacific, reflecting the poorly documented state of these languages to date and also to compensate for the relative underrepresentation

of languages in previous surveys on reciprocals (such as Nedjalkov et al, 2007). For the majority of languages included, no previous published data exists, though we include a chapter on English to enable cross-checking of our findings and methods against the vast literature on reciprocals in English.

The pivotal role of reciprocity in social cognition and organisation should not blind us to the fact that, on grounds of frequency, it is surprising that languages bother to evolve specialised reciprocal constructions. Actual occurrences of these constructions in texts are remarkably low: the BNC lists 103 *each other* per million words, ten times less frequent than reflexives (1,184 of all person/numbers), and half as frequent than the 3rd person masculine reflexive alone (*himself*). 290). Adding ‘one another’ to ‘each other’ we have a grand total of 130 words per million, i.e. roughly 1 per 10⁴ words – cf. the regular pronoun ‘it’ with 10,562 per million, i.e. two orders of magnitude more common.

Certainly, this crude count misses other English constructions that express reciprocal meanings in other ways, e.g. as a bare verb in *they kissed* or as an adjective in *of mutual benefit*. But even if we measure frequency of reciprocal meanings through a hand-count, this still gives such low figures as 0.114% for English in *Sense and Sensibility* (116 occurrences in 101,840 words) or 0.120% for Spanish in the first 274 pages of Isabel Allende’s *Ritrato en Sepia* (99 occurrences in 82,212 words), and these figures come from novels of human relationships with higher-than-usual incidences of reciprocal meanings; the figures fall by another order of magnitude in some other genres like travelogues¹. What we have here, then, is a grammaticalised

¹ See Evans REF for more hand-count figures.

category which occurs in most of the world's languages despite frequency levels far below those found for just about any grammaticalised meaning dimension. A negative consequence of this low frequency is that many grammars devote frustratingly little space to exploring their syntax and semantics in detail [insert averages from Paris talk], and even the exemplary collection of detailed language-specific descriptions in Nedjalkov (2007) with its detailed 85-question questionnaire (Geniusienie 1987) does not probe whether such meanings as 'chaining' and 'pairwise' reciprocals, which form a central part of the formal semantic literature on reciprocals, are encodable by the reciprocal construction – these are part of a set of meanings we explore below, and throughout the volume.

The facts mentioned above give us a unique triple line-up of a grammatical category with a low textual frequency, high cross-linguistic incidence of grammaticalisation, and centrality in the representation of social relations. Nonetheless, languages can certainly get away with no dedicated reciprocal construction, as in Kilivila (chapter 13) which despite being famed in anthropological circles for the centrality of exchange to its society and economy, lacks any specialised encoding of reciprocals in its grammar. This raises the question of why languages bother to have reciprocal constructions at all, since reciprocal meanings can always be implicated when necessary: this is the normal strategy across the board in Kilivila, but is also widespread in English, as in *John and Mary agreed*, which in many contexts implicates 'with each other' but is equally available for situations where they are agreeing with a third party.

Equally problematic for the question of why languages should have dedicated reciprocal constructions are the complex mapping problems they raise, striking at the heart of Frege's principle that the meaning of complex signs can be derived from the meanings of simpler signs, along with semantically-interpreted rules of composition. This principle is so fundamental to the enterprise of semantics – particularly within the formal semantic tradition – that a key principle for semantic typology should be to locate those parts of grammar where it does not obtain. Generative and formal semantic approaches to reciprocals have founded a long and interesting tradition of investigation – Dougherty 1970/1971, Fiengo & Lasnik (1973), Higginbotham (1980), Hi and [insert other refs] are some key references – essentially aimed at deriving the meaning of reciprocals by composition from the two elements *each* and *other* by movement or floating of the second element, recapitulating in a syntactic movement rule a historic grammaticalisation from an earlier structure like *(The) earls one/each hated (an)other* to the merger of the two quantifying elements in *The earls hated each other / one another*. Though a number of complex formal moves are involved, at least it is possible to view each element of the two-part binomial NP *each other* as mapping to a quantifier in logical form, with lambda operators getting the right crossover of agent/patient pairings from the participant set. This allows some semblance of iconic motivation for the English construction from the corresponding postulated meaning.

But once one confronts the dizzying variety of construction types used across languages, Frege's principle becomes increasingly frayed, since the binomial quantifier structure exemplified by English *each other* is far from ubiquitous. In fact, English is the only language in our sample where binomial quantifier structures are the primary coding strategy for reciprocals. Another three have two-part secondary or

other encoding mechanisms based on the reduplication of quantifiers or generic nouns – the Mah Meri *mole ..mole* construction (Ch. 8), the Yeli Dnye *woni-woni* construction (Ch. 10) and the Savo-savo *mapa-mapa* construction (Ch. X). Another three languages (Tsafiki *beko-beko*, Ch. 18; Barupu *báru-báru* and Kayardild *junkuyunku*) have secondary strategies based on the reduplication of adverbs meaning ‘return’ or ‘straight’.² Even on the most generous interpretation, then, substantially fewer than half the languages in our sample lack any type of binomial construction which would allow reciprocal meanings to be derived by composing two quantifiers.

A key paper by Dalrymple, Mchombo & Peters (1994) compared reciprocals in English and Chicheŵa, a Bantu language with a dedicated reciprocal construction employing a verbal suffix and concomitant valency reduction, a cross-linguistically common strategy exemplified in our sample as the primary strategy in Mundari (Ch. 6), Kayardild, Kuuk Thaayorre (Ch. 15), and as a secondary strategy in Mawng (Ch. 14) and Iwaidja.

Dalrymple et al showed that the semantics of Chicheŵa was directly comparable to that of English, down to the details of its fine semantic range across chaining, melee, and pairwise situations. This finding is a major problem for Fregean accounts of reciprocal meaning as a cross-linguistically universal solution, since there is no way to motivate the formal structure of the Chicheŵa structure – a single verb suffix – from its semantics in the same way as in English, with its accommodating and suggestive bipartite structure.³ Following from this, Dalrymple et al went on to

² We do not include chapter descriptions on Kayardild or Barupu here, but see Evans (1995) and Corris (REF) for descriptions of the reciprocal constructions in these languages.

³ Even within languages that encode reciprocal situations with bipartite quantifiers, there are problems for compositional accounts, or odd morphosyntactic anomalies. These include the fact, already pointed out by Fiengo and Lasnik (1973), that strong reciprocal interpretations are required by the unfloated construction (Each man saw the other) whereas binomial constructions (The men saw each other) have laxer semantic requirements allowing for weak reciprocity (see comments and examples in Chapter 4,

propose a distinct logical operator for reciprocals which is directly associated with the relevant grammatical coding site, e.g. the Chicheŵa reciprocal suffix, without being composed in the way previous authors had proposed for English. Further, they proposed that [check exact quote]. This interesting hypothesis, though, is based on just two data points – English and Chicheŵa.

Does the Dalrymple-Mchombo-Peters hypothesis hold up to the scrutiny of a broader typological sample? This question is addressed in Chapter Two, where we report the interesting finding that verbal reciprocal markers exhibit much more cross-linguistic variation in their semantics than those marked on NPs; this means that some verb-marking reciprocal constructions pattern like English (presumably including Chicheŵa, though this is not in our sample), but others do not (e.g. Indo-Pakistani Sign Language, Ch. 5, and Mundari, Ch. 6).

This opens the can of worms yet further, suggesting that what we have in any given language is a non-compositional association between a meaning that exhibits significant convergences cross-linguistically without being identical – an argument examined directly in Chapters Two and Nineteen, with relevant case studies strung out between, and a constructional form that varies far more radically.

The exuberant range of constructional meanings used to encode reciprocals has been commented on by many authors. In the preface to his massive survey, Nedjalkov (2007: ??) wrote that ‘the variety of devices used across languages to denote reciprocity and [the] variety of [] types of their polysemy ... are staggering’

§2.2), the difficulty of using movement to derive the emerging English construction of the type each...each other (again, Ch. 4, §2.2), and various odd properties of binomial expressions in a range of European languages, such as the fact that case choice is fixed on the first element (e.g. to nominative in Russian *drug druga*) so that while the second element varies its case in the way expected by the case frame, the first is fixed – it can’t take accusative in a frame like ‘I introduced John and Mary to each other’, which is hard to derive compositionally but can be readily modelled on non-compositional accounts.

and König and Kokutani (200X) and Evans (2007) survey structural ranges that take in just about every conceivable coding site – argument, predicate, auxiliary, adverb, modifier or various combinations thereof – and syntactic scale, from morpheme to clause to constructions involving two or three clauses.

Within the present sample we find coding on the NP (English, Savosavo), verb (Mundari, Jahai, Kuuk Thaayorre), auxiliary (Indo-Pakistani Sign Language), adverbs (Kayardid *junkuyunku*, as well as English back-to-back), ideophones (Tsafiki *beko-beko*), odd constructions which exhibit some monoclausal and some biclausal features (the Mawng and Iwaidja reciprocal complex), and ‘reciprocal mirror constructions’ in Lao (Ch. 7) which effectively conventionalise chains of three clauses.

Again, this astonishing range of formal realisations calls for explanation.

One line of argument might appeal to the complexity of the engineering demands made in overlaying two propositions onto one clause under situations of cross-coference (to use Nedjalkov’s felicitous term), with arguably a third proposition as well denoting joint activity or state. This argument would appeal to the principle, well-known in both evolutionary biology (Niklas 1994, 2006)⁴ and in functional linguistics under the rubric ‘competing motivations’, that the more tasks must be performed by a structure, the larger the number of viable design solutions. Unpacking this, reciprocals simultaneously perform a number of semantic tasks, since they overlay several propositions with commuted argument linking onto a single clause (e.g. ‘John loves Mary’ and ‘Mary loves John’ onto *John and Mary love one another*),

⁴ ‘[E]ngineering theory shows that the number of equally efficient designs for an artifact generally is proportional to both the number and the complexity of the tasks than an artifact must perform’ (Niklas 1994:6772)

‘morphological diversification became easier on complex as opposed to simple fitness landscapes. Likewise, it is biologically reasonable to suppose that the morphological diversity manifested by extant species occupying similar or identical habitats vouchsafes that very different phenotypes can have equivalent capacities for growth, survival, or reproductive success.’ (Niklas 2004:65)

plus arguably a third overlaid proposition with a conjoined argument along the lines of ‘John and Mary do this together’ – see Evans forthcoming for some typological arguments from a range of languages for postulating this third element, as well as the discussion of the sociative meaning in Lao (Ch. 7) and interactional meaning in Hup (Ch. 18) which also make this semantic element clear.

A second type of explanation would assert that these very varying structures in fact express somewhat different meanings (argument variant A) or at least differences in semantic ranges (variant B). Wierzbicka (200X) is an example of argument A, since she motivates the difference between several constructions for expressing reciprocity in English, French and Polish [check] by appealing partly to a difference in meaning between constructions involving different architectures (bipartite quantifier, simply plural predicate, construction with a single marker for reflexive/reciprocal). Nadjalkov (2007) is an example of argument B, arguing that coding in some positions will involve ‘older’ signs that have had time to accumulate a wider range of conventionalised interpretations. Either way, these are hypotheses that fall squarely within the key concerns of semantic typology, and can only be answered by methods that allow for a calibrated cross-linguistic sampling of meaning ranges for the relevant constructions – again, a central concern of this book.

Let’s return to the question of what proportion of languages actually have reciprocal constructions? This is not straightforward to answer, since assessing the percentage of languages that have specialised reciprocal constructions depends on our definition. Should we confine ourselves to ‘dedicated reciprocals’ like *each other*? Do we include constructions with other meanings such as reflexives (e.g. German *sich waschen* ‘wash oneself / each other’, Rotokas in Chapter 12, or Olutec in Chapter

16)⁵? Do we include what Maslova & Nedjalkov (2007) call ‘iconic reciprocals’ where the reciprocating actions are spread over two clauses (John likes Mary, and Mary likes John) – our first reaction might be to leave this out, dismissing them as simply ‘iconic’ (Maslova & Nedjalkov’s term). But in at least some languages there are specialised bi- or multiclausal constructions for expressing reciprocity, such as Amele.⁶

Maslova & Nedjalkov give the breakdown in Table 1 for their WALS sample of 175 languages. One interpretation of these figures is that 159/175 languages have some sort of reciprocal construction (i.e. counting any that is non-iconic). Another, stricter definition (excluding those with reflexive/reciprocal polysemy) would lower this figure.

Construction	N	%
No non-iconic reciprocal constructions	16	
All reciprocal constructions formally distinct from reflexives	99	
Both reflexive and non-reflexive reciprocal constructions	16	
Reciprocal and reflexive constructions	44	

⁵ Heine & Miyashita (2007:210) point to the sensitivity of this ambiguous example to context: *Sie waschen sich die Hände* will normally be construed reflexively ‘they wash their hands’ but *sie waschen sich den Rücken* will normally be construed reciprocally as ‘they wash each other’s backs’, though the possibility of a reflexive construal also with the second is shown e.g. by the existence of the following question posted on the web: *Wie waschen sich Singles eigentlich den Rücken* ‘how do single people actually wash their backs?’, with the reflexive construal emphasised by one posted answer *gar nicht, man läßt ihn waschen!* (‘not at all, you get (someone) to wash it’) [data from <http://www.platinnetz.de/frage/wie-waschen-sich-singles-eigentlich-den-ruecken-313101>, accessed 20/1/2010].

⁶ See Evans 2007:82 for arguments that the Amele construction exhibits specialised constructional properties.

In fact, the number of languages with dedicated reciprocal constructions is not directly recoverable from the WALS figures, since a language may have a reciprocal construction that cannot also encode reflexives but can encode something else, e.g. distributives (see Jahai, Chapter 9) or interaction or joint action more generally (see Hup, Chapter 18 and Lao, Chapter 7); this means that some of the languages in their second category would not count as having ‘dedicated reciprocals’. In the much smaller sample of 20 languages included in this book, 16 can on prima facie grounds be said to have a dedicated reciprocal construction, giving a figure of 80%, though (a) the sample is not properly stratified and was not constructed in order to answer the question of cross-linguistic frequency (b) in some cases, such as Mah Meri (Ch. 8) and Jahai (Ch. 9) the dedicated reciprocal is rather a marked and rare construction, (c) the applicability of the construction to some unidirectional events, such as in Lao and Hup, could lead us to exclude some of the languages – but counter to this, many constructions uncontroversially taken as reciprocals by English, such as *each other* in English, are sometimes applied to unidirectional events (see more discussion below).

As these examples show, the question of what counts as a reciprocal construction is anything but straightforward. This in turn is part of a central and increasingly recognised problem in typology, that of comparing semantic and grammatical categories cross-linguistically (adjective; perfective aspect; passive etc.) in a non-arbitrary way that does not simply essentialise the conjoined characteristics of reference constructions in English or some other well-known language (see e.g. Croft, Haspelmath, Goldberg – insert refs). One of the main goals of this book is to show that with the right methods we can investigate the cross-linguistic semantics of

this domain, and make meaningful typological comparisons, without having to predefine an answer to this question.

These grammatical structures – most familiar in English in the guise of the reciprocal pronoun *each other* – involve considerable semantic complexity. They must depict the interacting and often jointly accomplished activities of at least two parties, necessitating the overlay of several propositions at once. It turns out that languages vary enormously in the grammatical devices they have evolved to solve this challenging communicative problem. In fact, the encoding of reciprocal interaction arguably exhibits the most structural diversity of any grammaticalised meaning-domain

1 RECIPROCAL: FIVE PUZZLES

Scene-setting on reciprocals

- social centrality
- textual rarity
- mapping complexity
- structural variability

[and does this correlate with semantics? The Dalrymple-Mchombo hypothesis]

- semantic elusiveness, both broad (including the polysemies they participate in) and narrow (i.e. the exact range of what linguists would normally agree was pretheoretically definable as a reciprocal)

[cite Hanna & Filipova here]

2 APPROACHES TO THE STUDY OF RECIPROCAL

2.1 Recent typological work

Kemmer etc

König & Gast

Nedjalkov et al

2.2 Range of approaches

Syntactic (semantics as by-product)

Formal semantics (> Langendoen,

Cognitive (e.g. Kemmer)

Other definitional

[Some issues: strong-reciprocal bias

2.3 Problems in the semantic typology of reciprocals

But:

(a) difficulties in constructing valid cross-linguistic definition

(b) rarity (both in texts, and in descriptions of less-well known languages),

making it difficult to define full semantic range

(c) general lack of descriptive detail means that many relevant constructions have

simply been undescribed until now. Even English (ref. to Nordlinger article. each...

each other; back to back etc.), but also for other lgs (give some exs., e.g. Jahai, Mundari).

(c) lack of cross-linguistically comparable data sets (v. rare for a grammar to work through all the Langendoen types; all relevant predicates etc.; lack of exs with inanimates ec.)

(d) expressive alternatives? I.e. looking at the full range of categorisation decisions, not just the ones that end up being expressed by the form of interest [‘form-meaning relationships of linguistic expressions can be analyzed and described from a semasiological or an onomasiological perspective; i.e. you can either investigate and describe the semantic properties of particular linguistic forms, or the various ways in which particular meanings are expressed’ (Mosel 2006)]

2.4 Rationale for this study

- comparable data sets based on denotationally controlled stimuli permuting a structured range of variables
- use of videos (part of emerging set of data on event categorisation; within that, this is the most grammatical yet)
- sample; inclusion of at least one sign lg (Engl. for control purposes)
- factors permuted
- individual descriptions, plus common analysis of data (Ch. 2); individual chapters also cover other relevant construction types which don’t come up in the semi-elicited data e.g. Olutec
- conspectus ch and its function

3 KEY FINDINGS

GLOSSES AND ABBREVIATIONS ACKNOWLEDGEMENTS

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¹ Reciprocity' is used in some translations of 恕 (e.g.

<http://www.yellowbridge.com/onlinelit/analects15.php>), but so a range of other words have also been offered: 'empathy', 'forgive, pardon'.