RULES FOR ENGLISH PRONOMINALIZATION

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1. Introduction. Most contemporary handbooks of English recognize a class of so-called 'function-words' with special inflection, called pronouns, together sometimes with a wider class of words which are said to replace pronouns in certain environments and are called perhaps 'pronominals'; all are often classified as a subset of nouns. More or less attention may be given to the peculiarities of English pronominal inflection,[1] but important regularities among obligatory choices of pronoun are usually avoided, no doubt because all previous discussions of this subject in older texts have had to resort heavily to semantic notions. In fact, the strong implication of most contemporary treatments is that the choice of pronominals is dictated, if at all, purely by the intended MEANING of the sentence.

This view, as mentioned, overlooks several interesting formal contrasts of English grammar—contrasts which, in fact, impinge in their analysis upon one of the most fundamental features of natural language structure, namely the difference between simple and complex sentences. The very name 'pronoun', taken directly from French and Latin in its original meaning, is still understood etymologically and, we believe, quite correctly, as 'word used in place of a noun'; but what is not so widely appreciated is that this replacement is subject to very rigid grammatical rules. To illustrate this point and formulate certain of these rules we shall not attempt to discuss all of the various forms which have been called pronouns, but shall confine our attention to the major contrast between simple personal pronouns on the one hand and on the other the so-called reflexive pronouns in *-self* and the 'reciprocal' *one another*.[2] We shall point to certain peculiarities in their use and ask how these might be accounted for by means of grammatical rules.

2. Reflexive and simple pronoun. It is all very well to explain to a child who already knows the rules of English how the following three sentences differ in meaning, say by using appropriate paraphrases:

(1) The boys looked at them.

[1] For example, A. A. Hill gives an elaborate 'morphemic' analysis of English personal pronouns in his *Introduction to linguistic structures* 145–52 (New York, 1958). He says of 'pronominals' (551): 'No form class has been more confusingly defined, since the reliance is almost always on semantic characteristics. Thus, no less a scholar than George O. Curme was led to define *others* as a pronoun since it is a substitute. Yet since it shows all the formal characteristics of a noun, it must belong to that form class rather than to pronouns'. By 'formal characteristics' Hill presumably means characteristics based on (phonemic?) form, not characteristics which are abstract or mathematical as opposed to concrete, empirical, or contingent. Hill also describes a class of 'pronominals' in initial /ð/ and /hw/ (370–89) and makes occasional references to pronouns as nominal elements in various constructions.

[2] We shall not attempt to study or analyze the so-called 'emphatic' constructions in *-self*, as in *John did it himself*.

(2) The boys looked at themselves.
(3) The boys looked at one another.

For in these examples, as far as the individual sentences in isolation are concerned, the three pronominal expressions ARE independently selectable and in contrast. But one need not look far to find other simple examples in which certain of the pronominal forms are excluded and for which the most obvious rules-of-thumb begin to fail.

Thus, from the set
(4) I see him.
(5) He sees me.
(6) I see myself.
(7) He sees himself.
but not (8) *I see himself.[3]
(9) *He sees myself.

We might suppose that when the subject and the object of a sentence are identical the object must be the corresponding *-self* form (ignoring here the trivial question of which *-self* forms correspond to which subjects). Such a rule would then correctly explain why one understands that there are two people involved when one hears the sentence

(10) He sees him.

and why there is no sentence

(11) *I see me.

However, there are many other examples in which the simple pronoun also appears in contrast with the reflexive pronoun in *-self*:

(12) The men threw a smokescreen around themselves.
(13) The men found a smokescreen around them.

and even cases in which the repeated nominal must be replaced by the simple pronoun, as in

(14) I told John to protect himself.
(15) I told John to protect me.
but not (16) *I told John to protect myself.

[3] We use the asterisk throughout to designate ungrammatical expressions. Naturally our judgments of grammaticalness are based directly and solely upon our own maximally formal speech style and usage, and the rules we formulate will, therefore, characterize sentences in our own dialect only. It is not likely that corresponding rules which could be formulated for other forms of English will diverge sharply from those which we use to construct sentences, but there will be readers who judge differently certain examples we quote.

It is also important to recognize in this connection that, except for utterly impeccable short sentences or for unintelligible gibberish, absolute judgments on grammatical acceptability cannot be given with assurance unless some independent knowledge has already been acquired about other formal features of English sentences and grammar relevant to the doubtful examples in question. Thus, we would reject the 'queer sentence' **John astounded the dark green* with some conviction, since we know from independent analyses that the distinction between 'animate' and 'inanimate' nouns is relevant in English sentence structure. In any case, the point of such studies as this is, of course, not to legislate against the use of certain expressions nor to disparage certain styles or dialects of English, but rather to account for an indisputed widespread agreement among speakers of one dialect of English that certain types of expression are structurally deviant.

Having suggested already that a nominal which repeats the subject is to be replaced by a reflexive pronoun, we might attempt to preserve this rule by analyzing (13) as having roughly the same grammatical structure as

(17) The men found a smokescreen to be around them.,

or ambiguously as

(18) The men found a smokescreen which was around them.

or even (19) The men found a smokescreen and it was around them.

for in the latter three sentences we would expect the same pronominal replacements as in

(20) The smokescreen was around them.

This is to say, we might consider (13), (17), (18), and (19) all to contain TWO different component sentences each, i.e. to be 'complex', and we might say further that the given pronominalization rule which yields reflexives must be applied first, before the components are joined; afterwards, some other rule applies which yields simple pronoun replacements.[4] Accordingly, we treat (14) and (15) in such a way that they are said to contain respectively

(21) John protects himself.

and (22) John protects me.

There are several different ways in which a noun may be embedded twice in a sentence, and when the second occurrence is part of the same simplex (kernel) sentence the pronominal replacement is always reflexive; but when the two occurrences are from different component source sentences, the subordinate one is replaced by the simple pronoun.[5] We give here a brief indication of the grammatical analyses for several sentence types showing this contrast between simplex and complex.

(23) John has no control over himself.

(24) John has no covering over him.

Here the contrast is essentially between a composite transitive verb *have control (over)*, generated in the kernel, and a complex sentence containing a discontinuous verb-plus-complement constituent *have ... over him*. The latter 'complement'-type sentence arises transformationally from two source sentences, thus:

(25) John has+Comp no covering.
(26) No covering is over John. } →

(27) John has over John no covering. →

(28) John has no covering over John. →

(24) John has no covering over him.

The shift of the object nominal into its correct position between the two parts of the verb phrase is an obligatory transformation required for many other sentence types also, and the replacement of the second occurrence of *John* by *him* is the obligatory pronominal transformation under discussion.

[4] Some classical grammarians also interpret the reflexive as the result of a change imposed on a more basic sentence, and thus in a sense transformationally. Cf. e.g. H. Poutsma, *A grammar of late Modern English* 2.836 (1916): '... to denote that the person(s) or thing(s) referred to in any enlargement of the predicate are the same as that (those) indicated by the predicate.' Or even more clearly O. Jespersen, *Essentials of English grammar* 111 (1937): 'When subject and object are identical, we use for the latter the so-called reflexive pronoun.'

[5] Although the basic idea itself is ancient, the formal particularities in this analysis of certain sentences as transforms of underlying source sentences are taken directly from well-known works of N. A. Chomsky. The details of English syntactic structure lying behind our analyses, as well as a more general discussion of the theoretical basis for this view of grammar and of language, may be found in R. B. Lees, *The grammar of English nominalizations* (*IJAL* 26:3, Pt.2, 1960).

(29) John bought Mary a car to drive herself around in.
(30) John bought Mary a car to drive him around in.

The underlying source sentences which account for the contrast in pronominal replacements here are, for (29): *Mary drives herself around in the car*, and for (30): *Mary drives John around in the car*. Both sentences are complex, containing 'Infinitival Nominal' transforms of the second source sentence. As prototype derivation consider the following:

(31) John bought Mary a car for Nom.
(32) Bill drives Jim around in the car. →
(33) John bought Mary a car for for Bill to drive Jim around in.→
(34) John bought Mary a car for Bill to drive Jim around in.

In (31) the symbol Nom represents a nominal, in this case an abstract noun which is to be replaced by an Infinitival Nominalization of the form *for N to V*.

Now, if in (32) we had had *Mary* in place of both *Bill* and *Jim*, we should have obtained the sentence

(35) John bought Mary a car for for Mary to drive Mary around in.

Then the third occurrence of the noun *Mary* would be replaced by the reflexive *herself*, since it repeats a nominal (in *for Mary*) within the same simplex, or kernel, sentence. In the resulting sentence

(36) John bought Mary a car for for Mary to drive herself around in.

the second occurrence of the noun *Mary* is then pronominalized, since it repeats the preceding noun *Mary* in the OTHER source sentence (the so-called 'matrix sentence': (31), the sentence into which the transformed Infinitival is inserted in place of the unspecified abstract nominal Nom).

(37) John bought Mary a car for for Mary+Pron to drive herself around in.

This pronominalized noun is next completely deleted by an obligatory transformation on all Infinitival Nominals appearing as subjects of *for*-phrase adverbials of 'purpose' (rather than the usual pronoun substitution obligatory for other sentence types):[6]

(38) John bought Mary a car for for to drive herself around in.

Finally, there is an obligatory ellipsis of prepositions before the *to* and *for* of Infinitival Nominals, yielding:

(29) John bought Mary a car to drive herself around in.

If, on the other hand, we had had *John* in place of *Jim* in (32) and *Mary* in place of *Bill*, the derivation would have been:

(31) John bought Mary a car for Nom.
(39) Mary drives John around in the car. →
(40) John bought Mary a car for for Mary to drive John around in.→
(41) John bought Mary a car for for Mary+Pron to drive John+Pron around in.→
(42) John bought Mary a car for for to drive him around in.
(30) John bought Mary a car to drive him around in.

Here in (41) the noun *John*, since it repeats a noun *John* in the matrix sentence, is pronominalized instead of reflexivized, and becomes *him* under the appropriate morphophonemic rules.[7]

As a final example, consider the two contrasting sentences:

(43) John smeared the oil on himself.
(44) John ignored the oil on him.

The first contains in the predicate an object *the oil* and an adverbial *on himself*; and it arises from the kernel sentence *John smeared the oil on John*. Since the second occurrence of the noun *John* repeats a noun within the same simplex, it is pronominalized to the corresponding *-self* pronoun. But in (44) the object of the verb *ignored* is itself a transform of an underlying sentence of the form *The oil is on John*. The predicate of this copula-type sentence is introduced as a relative-clause modifier of *oil* in the matrix sentence *John ignored the oil*, yielding

[6] Ibid., Rule (T68*).

[7] And the redundant preposition *for*, when it occurs before the *to* or *for* of an Infinitival Nominal, is also automatically deleted; ibid., Rule (T69*).

John ignored the oil which was on John, and the copula is then deleted to yield a Postnominal Modifier *on John*, thus:[8]

(45) John ignored the oil.
(46) The oil is on John. } →
(47) John ignored the oil which is on John.→
(48) John ignored the oil on John.→
(49) John ignored the oil on John+Pron.→
(44) John ignored the oil on him.

There are, of course, other restrictions on the various rules to which we have alluded here, which in some cases may affect the final outcome of pronominalizations. For example, when the pronominalized noun is a repetition of an indirect object in the matrix sentence in a sentence type like *You bought me a dog to amuse myself with*, the total deletion of an intermediate subject of the *for*-phrase is optional: *You bought me a dog for me to amuse myself with*. Furthermore, in this same sentence type, the rule which inserts the Infinitival Nominal into the matrix sentence *for*-phrase itself requires that the two source sentences share a certain noun, that this noun be the object of a verb or a preposition in the constituent sentence, and that it be totally deleted in the transform:[9]

(50) You bought John a dog for Nom.
(51) John amuses John with the dog. } →
(52) You bought John a dog for for John to amuse John with the dog.→
(53) You bought John a dog for for John to amuse John+self with.→
(54) You bought John a dog for for John+Pron to amuse John+self with.→
(55) You bought John a dog for (for him) to amuse himself with.→
(56) You bought John a dog (for him) to amuse himself with.

Another restriction is that the pronominalized verbal object may not become the subject of a passive sentence: *John shaves himself.* → **Himself is shaved by John.* It is also best, no doubt, to reject such sentences as (*)*John is shaved by himself.* (If not, we can simply order the rules so that Passive precedes Reflexive.) Both restrictions might be incorporated into a constraint on the passive transformation itself, to the effect that the subject and object of the active verb may not be identical in the string to which the passive rule applies.[10]

Our simple rule based on repetition of nouns within the same simplex would seem to be violated by sentences like

(57) Protecting yourself is difficult in this neighborhood.

where there does not appear to be any antecedent to govern the reflexive pronominalization in *yourself*. Noting parenthetically that it is probably best to consider *you* in such a sentence to be a variant of the impersonal noun *one*, we might say that (57) contains an 'action'-type Gerundive Nominal[11] and that the impersonal subject is later deleted from such constructions, thus:

(58) Nom is difficult here.
(59) One protects one. } →
(60) One's protecting one is difficult here.→

[8] Ibid., Rules (GT 19) and (T58).

[9] This rule would be an addition to Rule (GT13) of Lees, op.cit., not discussed there. Also, in connection with these indirect-object examples, we shall consider sentences of the form *I bought me a hat*, confined to the first person, to be nonstandard colloquial variants of sentences of the form *I bought myself a hat*.

[10] This is an addition to Rule (T2) of Lees, op.cit. Also cf. Jespersen, *A modern English grammar* 3.§15.1$_3$.

[11] Lees, op.cit., Rule (GT10) and the preceding discussion. By 'action type' Gerundive Nominal we mean that type which must have an indefinite human subject and no auxiliary accompanying the verb (i.e. we have no **John's protecting himself is hard*, nor **Having protected oneself is hard.*)

(61) One's protecting one+self is difficult here.→
(62) One's protecting oneself is difficult here.→
(63) Protecting oneself is difficult here.→
(64) Protecting yourself is difficult here.

Another ostensible violation of our rule would seem to be the following imperative sentences:

(65) Protect yourself now!
(66) Protect yourselves now!

However, there are independent, compelling reasons to consider these sentences to be derived from sentences with *you*, singular or plural respectively, as the subject noun-phrase (and perhaps with the modal *will* in the Auxiliary).[12] The transformational rule which produces imperatives would then simply delete the auxiliary; the subject *you* would also be deleted optionally at a later point as a stylistic variant. This treatment would account for the fact that the rules which hold for the object nominal in the imperative sentence are the same as those which apply to the object nominal in a declarative sentence, viz., there is no **Protect you now!*, but only *Protect yourself now!* Furthermore, we should account for the peculiar restriction that of the reflexives only those of the second person occur at all in imperative sentences, that only in the case of second person genitives can the intensive *own* be used:

Use my pencil! Use his pencil! Use your pencil!
Use your own pencil!
*Use my own pencil! *Use his own pencil!

and that there are no imperatives with the *have*+Ppl or *be*+Ing formatives:

Do it! *Have done it! *Be doing it!

The derivation would be:

(67) You+Sg Aux protect you+Sg.→
(68) You+Sg protect you+Sg.→
(69) You+Sg protect you+Sg+self.→
(70) You+Sg protect yourself.→
(71) You protect yourself.→ (optional)
(72) Protect yourself.

In still another, but opposite, type of counter example which might arise there is a repeated nominal but no reflexive pronominalization, as in

(73) Mary's father supported her.
(74) Mary's father supported himself.

but no: (75) *Mary's father supported herself.

in which the underlying sentence must have been

(76) Mary's father supported Mary.

However, there is a good deal of evidence supporting the view that all genitives in English are transformational in origin, so that the underlying sentence would then be rather *The father supported Mary*, with no repetition. (The second source sentence for the genitive itself would presumably have been *Mary has a*

[12] We ignore certain special expressions such as *Just look at you!*, which might possibly go back to a hortatory *Let us just look at you* or the like.

father, with intermediate stages: *The father that Mary has supported Mary*, and *The father of Mary supported Mary*.)

Ignoring the various details of special deletions for 'purpose' adverbials in *for* with the Infinitival or Gerundive Nominals, the rules we propose for pronominalization are then these:

(A) Reflexive Rule:

X-Nom-Y-Nom′-Z → X-Nom-Y-Nom′+Self-Z

where Nom = Nom′ = a nominal, and where Nom and Nom′ are within the same simplex sentence.

(B) Pronoun Rule:

X-Nom-Y-Nom′-Z → X-Nom-Y-Nom′+Pron-Z

where Nom = Nom′, and where Nom is in a matrix sentence while Nom′ is in a constituent sentence embedded within that matrix sentence.

The two rules are to be applied in the order given.[13] Later morphophonemic rules will then yield the appropriate pronoun forms *me*, *myself*, *yourself*, ..., *themselves*, etc.

The analysis which we have given for reflexive and simple pronominalization does not by any means give an immediate explanation for all known occurrences of the pronominals in question, but this may be due simply to our incomplete understanding of the structure of certain sentence types. For example, we may analyze

(75) John has many books about him.

as either a 'complement'-type sentence from

(76) John has+Comp many books.
(77) Many books are about John. → (78)

(78) John has about John many books.

or else we may analyze it as a Postnominal Modifier type sentence from:

(79) John has many books.
(80) The books are about John. → (81)

(81) John has many books which are about John.

But one may also say

(82) John has many books about himself.

parallel to

(83) John has written many books about himself.

Sentence (82) is perhaps also parallel to

(84) John found a picture of himself.

Such constructions with *picture of*, *description of*, *book about*, *story of*, etc. are not at all like the prepositional periphrases of the genitive, despite the existence also of corresponding expressions *John's picture*, *John's story*, etc.[14] The genitive

[13] Ibid., Rules (T65*) and (T67*). Following a suggestion by L. R. Gleitman, we assume that the rules are optional for third person and obligatory for first and second.

[14] Also, incidentally, they are precisely those expressions of English which N. Goodman attempted to use in formulating a theory of synonymy as a part of the theory of reference: 'On likeness of meaning', *Anal.* 10 (1949), revised in L. Linsky's *Semantics and the philosophy of language* 67–74 (1952).

periphrasis is not possible with pronouns:

(85) We showed him his picture.
(86) We showed him a picture of himself.
(87) We showed him his room.
but not (88) *We showed him a room of himself.
nor (89) *We showed him a room of him.

The expression in

(90) We showed him a room of his.

is not parallel to the genitive in (87) but is more like the definite noun phrase in

(91) We showed him this room.

Notice further that there does not seem to be a transformational constituent-break in (86), for the subject itself also governs the reflexive:

(92) We showed him a picture of ourselves.

Thus, it would seem that such double-object-verb sentences with *give*, *show*, *buy*, *tell*, etc. are either kernel sentences or are simple transforms, but are not so-called generalized transforms (i.e. sentences arising transformationally from two or more underlying source sentences).[15] Notice also that the prepositional-phrase form in some cases is quite unnatural:

(93) John gave Mary a picture of herself.
but not (94) *John gave a picture of Mary to herself.
not (95) *John gave a picture of herself to Mary.
though (96) John gave a picture of himself to Mary.

It is just possible then that the prepositional-phrase periphrases of double-object-verb sentences are derived from the latter, and not vice versa, but with the restriction that the periphrasis transformation does not take place after reflexivization of the last noun when the latter repeats the INDIRECT OBJECT. But, however we analyze double-object-verb sentences, the appearance of the reflexive pronoun in sentences like (82) still seems anomalous, for it appears to be natural to understand the sentence as exactly parallel to

(97) John has many books which are about John.

The latter is a typical Relative-Clause-to-Postnominal-Modifier conversion. But in that case there would be no antecedent in the subordinate constituent sentence to govern the appearance of *himself*.

3. Absolute reflexive. Next we note that English also has reflexive verbs, i.e. verbs whose objects are, at least in part, restricted to reflexive pronouns. Thus, *express* is an absolute transitive verb (which means that it requires an object),

[15] In fact C. J. Fillmore has given a reasonable analysis of the double-object construction in *Indirect object constructions in English and the ordering of transformations*, Ohio State Research Foundation Project on Syntactic Analysis, Report #1, Prof. 1303, 13 Feb. 1962. Fillmore assumes an underlying construction of the form *John Tns give to Bill a bite* (exactly parallel to *John Tns shoot at Bill a gun*), which is later subject to the usual 'separation' rule, yielding *John Tns give a bite to Bill*, i.e. the sentence *John gives a bite to Bill*. There is, however, an intervening optional rule which deletes the preposition *to*, yielding *John Tns give Bill a bite*, the sentence *John gives Bill a bite*. He is able to account also for the existence of two different passives for such indirect object sentences, and he gives an analysis of the contrasting indirect object construction in *for: John buys a car for Bill*:*John buys Bill a car*, for which there is no passive.

but its object cannot be an animate noun:

(98) *John expresses.

(99) *John expresses Mary.

(100) John expresses emotions.

yet it may be followed by a reflexive pronoun:

(101) John expresses himself.

Indeed, the reflexive object MUST be animate:

(102) *John expresses itself.

Furthermore, such verbs may not be separated from their reflexive objects under conjunction:

(103) *John excused and behaved himself.

yet there is no general restriction of this sort on sentences containing reflexive pronouns:

(104) John cut and scratched himself.

Sentence (103) must be reworded as *John excused himself and behaved himself*. Finally there are among these special verbs some whose ONLY objects are reflexives with the subject as antecedent:

(105) John absents himself.

(106) John perjures himself.

(107) John bestirs himself.

(108) John behaves himself.

(109) John prides himself in that.

but no (110) *John absents Mary.

nor (111) *John absents it, etc.

We shall say, then, that among the intransitive verbs V_{in} there are not only absolute intransitives V_i (*vanish*, *arrive*, etc.), which may yield prenominal Gerundive Modifiers as in *barking dogs*, *vanishing race*, etc., 'locative' intransitives V_{Loc} (*lie*, *stand*, etc.), which require locative adverbial (i.e. there is no **The baby lay*, but only *The baby lay in bed*, etc.), 'motion' intransitives V_{Mot} (*go*, *sneak*, etc.), which require adverbs of motion (i.e. there is no **John sneaked* (or *snuck*), but only *John sneaked into the house*, etc.), and perhaps many other subtypes, but there are also so-called 'reflexive' intransitives V_{Rf}, which may not be freely followed by an object nominal. Later all such reflexive verb phrases undergo an obligatory transformation which inserts a replica of the subject after the verb, and this obligatory 'object' is then pronominalized in the usual way: being part of the same simplex as its subject, which it repeats, it yields the appropriate reflexive pronoun. This obligatory insertion of a reflexivizable object follows, in the grammar, the optional rules for WH-questions, and hence these objects are not questionable like regular verbal objects:

(112) *Whom did John behave?

As L. R. Gleitman has pointed out (in an unpublished paper), there are also certain constraints on ordinary conjunction for pronominalized sentences: the following pronominalizable noun may be conjoined with another noun, but not the antecedent noun:

(113) John prefers John to them. → John prefers himself to them.

(114) I prefer John to them.

(115) John prefers me to them.

(116) John prefers John and me to them. → John prefers himself and me to them.

but not (117) *John and I prefer John to them. (→ *John and I prefer himself to them.)

It therefore seems probable that the pronominalization rule must precede the rule of conjunction.

4. Reciprocal pronominalization. We return now to example (3), in contrast to (1) and (2). We note that when the following pronominal is 'reciprocal'—*one another* or *each other* (we shall ignore the difference, if any, between the two types)—the subject of the sentence must be plural:

(118) *The boy looked at one another.

Now, there are also several other important restrictions on the appearance of reciprocal objects. Note the following examples:

(119) Red and green complement one another.

(120) John and Mary frighten one another.

(121) Red and green frighten them.

but not (122) *Red and green frighten one another.

Thus, while *one another* can be the object of *frighten* (120), and while both animate and inanimate plural nouns may be subject of *frighten* (120, 121), and while inanimate nouns may appear with the reciprocal (119) as well as animates (120), *one another* may not be the object of the verb *frighten* when the subject is inanimate. But this restriction applies precisely when the verb of the sentence belongs to that special class of verbs which require animate objects (*frighten, please, amaze,* etc.). Thus, we see that the object *one another* is a pronominalization of its subject, and it occurs only when the subject is plural and is repeated in the object.[16]

We shall say then that in addition to the reflexive pronominalization transformation there is an optional rule of the following form:

(C) X-N+Pl-Y-N′+Pl-Z → X-N+Pl-Y-N′+Pl+Recip-Z

where N = N′ and they are within the same simplex, and where N is a noun, Pl is the plural morpheme, and Recip is the reciprocal morpheme. Later morphophonemic rules will then yield the appropriate forms *one another* and *each other* from *N+Pl+Recip*.

Again there may be some difficulties with conjoined expressions, as in

(123) John and Mary frighten one another.

for the source sentence would have to have been:

(124) John and Mary frighten John and Mary,

a rather implausible sentence of English. On intuitive or semantic grounds one

[16] Cf. the very similar analysis of the reciprocal in Danish given by O. Jespersen, *Sprogets logik* 79–80 (1931): 'Når karen ligner maren, ligner maren også karen. I disse tilfelde er der intet i vejen for at gøre subjekt og objekt til to forbundne subjekten, og objektets plads udfylder vi da med ordet hinanden ... As v Bo = Bs v Ao = (A + B)s v hinanden-o.' This interpretation is again essentially transformational, as are many of Jespersen's grammatical analyses.

would suppose the correct source to be the pair of sentences:

(125) John frightens Mary.|Mary frightens John.

This implies that the process is conjunctional; but the expression *one another* appears in other ways to be pronominal, for it concatenates with other pronouns, as in:

(126) They preferred themselves and one another to the strangers.

and it fails to separate from its verb:

(127) They set the men up in office.
(128) They set up the men in office.
(129) They set themselves up in office.
(130) They set one another up in office.

but not (131) *They set up themselves in office.
nor (132) *They set up one another in office.

Therefore, it seems that the best course is to extend the conjunction rules to permit conjoining the members of reciprocal pairs in a special way and then have only one reciprocal pronominalization rule afterward:

(133) John frightens Mary.
(134) Mary frightens John. $\rightarrow$
(124) John and Mary frighten John and Mary.

This analysis now yields an explanation for a peculiar restriction on the subjects of certain apparently intransitive verbs, as in:

(135) They kissed.
(136) John and Mary met.
(137) Hydrogen and oxygen combine.

The subject must be plural:

(138) *He kissed.
(139) *Hydrogen combines.

There is also another, even more restricted type of verb for which the subject may be only a plural noun or a mass noun (but not a conjoined nominal), as in

(140) The soldiers scattered.
(141) The dew collected.

but not (142) *The soldier scattered.
(143) *John and Mary scattered.
(144) *The dewdrop collected.

Furthermore, the conjoined subjects permitted in sentences like (136) would not seem to be ordinary conjunctions, for there is no

(145) *John met and Mary met.

Thus, these verbs are not exactly like the larger class of apparent intransitives of the form

(146) John ate,

which may be analyzed as transitives with deleted object, in contrast to the absolute transitives:

(147) John devoured the meal.

but not (148) *John devoured.

and in contrast to the absolute intransitives V_i:

(149) John arrived.

The verbs in question here may also be regarded as deleted-object transitives, but with the restriction that the object must be *Nom+Recip*. Thus, we should derive

(150) John and Mary kissed John and Mary.→
(151) John and Mary kissed each other.→
(152) John and Mary kissed.

In addition to this limited class of direct-object verbs with deletable reciprocal, there is also the freer case of verbs which require a preposition after them, somewhat like the case of locative and motion intransitives:

(153) The sodium and chlorine combined *with* each other.→
(154) The sodium and chlorine combined.
but not (155) *The sodium combined.
nor do we have the derivation
(156) They experimented with one another.*→
(157) They experimented.

The antecedent noun for the reciprocal pronominal need not be the subject of the sentence, of course, and there are therefore some ambiguous expressions, such as

(158) They pushed them toward one another.
understood either as parallel to
(159) The boys pushed the girl toward one another.
or as parallel to
(160) The boy pushed the girls toward one another.
It might even be possible, for some speakers, to have the two pronominals contiguous as direct and indirect objects:
(161) We showed each other ourselves.
(162) We showed ourselves each other.

The reciprocal is not restricted in the same manner as the reflexive, viz. to simplexes (in contrast to generalized transforms or complexes). Thus we have

(163) They placed their guns in front of them.
(164) They placed their guns in front of one another.
but not (165) *They placed their guns in front of themselves.
though some speakers may have the latter sentence as a colloquial variant of (163). Similarly:
(166) They held firecrackers behind them.
(167) They held firecrackers behind one another.
and not (168) *They held firecrackers behind themselves.
But, on the other hand, like the reflexive, the reciprocal may not occur in certain other subordinate clauses, as in

(169) They forced the king to help them.
but neither (170) *They forced the king to help one another.
nor (171) *They forced the king to help themselves.
Thus, for some dialects, it is not yet clear just how the reciprocal rule (C) needs to be constrained, though we have stated it with the condition imposed that the two relevant plural nouns must be within the same simplex.