Two Case Studies

of

Chomsky's Play Acting at Linguistics

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Section 1 Remark

Noam Chomsky (hereafter: NC) (1959a: 39) introduced into linguistic discussion the term 'play acting at science'. This turns out to have been a useful contribution in that arguably no one in history has more extensively or more successfully practiced the activity denoted by this term than NC himself.

If there is such a thing as play acting at science and if, as many claim, linguistics is, or at least seeks to be, a science, then play acting at linguistics is an activity type subsumed by NC's 1959 concept. To justify further the claim that NC's work is indeed shot through and through with play acting at linguistics (see Levine and Postal, 2004, Postal, 2003, 2004, 2009, 2012 previously posted at LINGBUZZ for some earlier documentations to this effect), the present article studies at some length NC's proposals across the decades from 1962-2002 about two putative principles of NL he has introduced. Detailed listing and analysis of remark after remark of NC's about the supposed principles highlights the a priori unbelievably debased quality of the proposals and claims at issue and should leave no rational doubt about their thorough instantiation of the concept 'play acting at linguistics'.

A note on origins. This article was originally written in 2004-2005 and has been only modestly updated for posting on LINGBUZZ. This updating does *not* involve any extension of the references. When originally written, this study was intended to be merely one chapter in a full length book devoted to the (lack of) quality and standards in NC's linguistic work. That work, listed as Levine and Postal (in preparation) in the references of Levine and Postal (2004), was

abandoned for various reasons. The updating mentioned here then merely involves a few deletions and rewordings intended only to permit the work to stand alone, specifically by eliminating crossreferences to other intended chapters of the ultimately merely hypothetical book. ***

Section 2 The A-over-A Principle

2.1 The Issue

In a reply to one of his interviewers' questions, NC remarked:

(1) Chomsky (2002: 129-130)

"When the tension between descriptive and explanatory adequacy came up, there were several approaches: one approach, which is in 'Current Issues in Linguistic Theory,' was to try to find principles like A over A."

The nonsubstantive reference in (1) to the *A-over-A Principle*, first proposed by NC nearly forty years earlier, could seem like an innocent reminiscence. But in historical context, its mention in 2002 should be seen as part of a long standing unworthy pretense.

While work in poorly developed fields like theoretical linguistics may have uncovered valid general principles, there will be an inventory of principles proposed over time which have been shown to be inadequate, to be incapable of serving as part of an adquate overall account of the subject matter, to simply be wrong. Call such inadequate proposals *failed principles* (F-principles). Clearly, mentioning F-principles in a historical account is perfectly; in fact, a good deal can be revealed by seeing just why they are inadequate, how this can be determined, what evidence counts against them, etc. What can never be justified, however, is to cite, especially to (even partially) non-technical audiences, ideas that have been demonstrated to be F-principles *without indicating that they are such*. Even worse would be to cite or appeal to a known F-principle in such a way as to claim, or even insinuate, that it is part of an explanatory account of some range of phenomena. I assume that this general standard of intellectual practice is uncontroversial; for example, there is no possibility that a competent mathematical audience would give any credence to a supposed proof of some conjecture which depended in turn on a putative result previously shown to contain a vitiating crucial error.

The 2002 mention of the A-over-A Principle in (1) is though simply the most recent of a substantial sequence of instances in which NC has, at points in history long *after* it was shown to be an F-principle, sought to suggest directly or indirectly that this idea could be a serious element of NL understanding and/or to imply that it represents a serious intellectual contribution. Tellingly, while NC has sometimes cited it in a nonassertive or historical fashion, as in (1), he has, I believe, never stated anywhere that the idea is just wrong and has to be abandoned as an F-principle. [1], [2] Moreover, with an exceptional ability to induce others into adopting his own errors and disregard of deontological standards, he has clearly influenced other linguists to cite this discredited idea as part of supposed serious explanatory accounts. So, while taken in isolation, (1) might seem merely a harmless or quaint mention in passing of some interesting idea from the past which just didn't make it, in the context of a full history of NC's association with this concept, (1) is arguably a minor element of a persisting piece of deception, a really rather successful attempt to *pretend* that an F-principle is a serious discovery about NL.

2.2 The Rise and Fall of the A-over-A Principle

The previous section's concluding strong words are well supported by the history of this idea. The relevant principle was first suggested in the following passage from one of NC's early works:

(2) Chomsky (1964a: 930-931)

"What it asserts is that if the phrase X of category A is embedded within a larger phrase ZXW which is also of category A, then no rule applying to the category A applies to X (but only to ZXW)."

However, the name 'A-over-A' seems to date from Ross (1967 [1986: 10]) and from Chomsky (1968: 43), the latter of which proposed a somewhat different formulation:

(3)

"Suppose we were to impose on grammatical transformations the condition that no noun phrase can be extracted from within another noun phrase--more generally, that if a transformation applies to a structure of the form

$$[S\ldots\ [A\ \ldots\ ]\ A\ \ldots]\ S$$

for any category A, then it must be so interpreted as to apply to the *maximal* phrase of type A."

But in his 1967 dissertation, of which, moreover, *NC was the principal director*, Ross (1967 [1986]) devoted a whole chapter to showing that such a principle was untenable, *even for English*. Not only has his demonstration never been refuted, NC himself (in Chomsky, 1972c, an expanded version of Chomsky, 1968, the latter arguably written before Ross's thesis work was produced), recognized that Ross had raised genuine difficulties.

(3) Chomsky (1972c: 56)

> "Given just the facts so far presented, it would be proper to postulate the A-over-A principle instead of this alternative precisely because the A-over-A principle has a certain naturalness, whereas the alternative is entirely ad hoc, a listing of nontransparent structures. But there is crucial evidence, pointed out by John Ross (see reference in note *21),* suggesting that the A-over-A principle is not correct. Ross points out that in the constructions from which noun phrases cannot be extracted, adjectives also cannot be extracted. Thus, consider the contexts "I believe that John saw-," "I believe the claim that John saw-," and "I wonder whether John saw-." From the first of these, but not the second or third, we can extract a noun phrase in interrogation or relativization, a fact that we have been attempting to account for by modifications of the A-over-A principle. But the same is true of extraction of adjectives. Thus we can form "handsome though I believe that John is," but not *"handsome though I believe the claim that John is," *"handsome though I wonder whether John is," etc. Whether one can extend the approach just discussed to account for this problem in some natural way, I do not know; at the moment, I see no approach that does not involve a perfectly ad hoc step. Perhaps this indicates that the approach through the A-over-A principle is incorrect, leaving us for the moment with only a collection of constructions in which extraction is, for some reason, impossible to accomplish."

What NC touches on in (3) is Ross's (1967 [1986]) observation that in general a structure Q from which extraction of some element was *properly* blocked by the A-over-A Principle were such that extractions from Q which did not violate this principle were also bad. That is, in such cases, the A-over-A Principle, while not suffering from counterexamples, was too weak. Ross argued that the work done by the A-over-A principle should actually be attributed to various *island constraints*, which blocked extractions regardless of the existence or not of categorial identity

between the island I and the element extracted from I. For instance, while the A-over-A Principle could block (4a), something must as well block (4b), which satisfies the former constraint vacuously. Ross proposed his so-called *Complex NP Constraint*. Similarly, for (5a, b):

(4)a. *[$_\alpha$ Which tiger] did the police arrest [$_\alpha$ the man who claimed I ran over]?

   b. *[$_{\beta \neq \alpha}$ How tall] did the police arrest [$_\alpha$ the man who claimed I was]?

(5)a. *[$_\alpha$ Which tiger] did they discuss [$_\alpha$ evidence that she had eaten]?

   b. *[$_{\beta \neq \alpha}$ How tall] did they discuss [$_\alpha$ a proof that she was]

Despite his remarks in (3), in invocation after invocation of the A-over-A Principle, in years to follow, including that in (2002: 129-130), NC ignores the factual problems which bedevil the A-over-A Principle. Moreover, even (3) fails to mention the *worst* difficulty which Ross raised for the principle, namely, simple prima facie *counterexamples* like (6b-d):

(6) Ross (1967/1986: 11-12)

  a. the reports, the height of the lettering on the covers of which the government prescribes,

  b. the reports, the lettering on the covers of which, the government prescribes the height of,

  c. the reports, the covers of which the government prescribes the height of the lettering on,

  d. the reports, which the government prescribes the height of the lettering on the covers of ,

In such cases involving the otherwise uniform phenomenon of pied piping in nonrestrictive relative clause formation, it appears that nominals can be extracted, regardless of how deeply they are nested in other nominals. These cases, unlike those in (4) and (5), do involve counterexamples, instances where the principle wrongly blocks perfectly grammatical structures. No one has, to my knowledge, ever shown how (6b-d) could be kept consistent with any falsifiable variant of (3) that is, any one with factual content; but see the discussion of Bresnan (1976) below. So taken together, the cases which Ross (1967/1986) discussed in Chapter 1 of his thesis supported a claim that the principle was both too strong and too weak, even for English. Arguably, the A-over-A Principle, a putative linguistic universal, had in 1967 already been shown to fail even for its inventer's NL.

Moreover, other effectively unanswerable objections to the A-over-A Principle are easily found even in English and should have been clear to anyone who thought seriously about Ross's discussion. Consider:

(7)a. Jenny was aware that Frank was sure that Joan was angry.

    b. [$_\alpha$ Angry] though Jenny was [$_\alpha$ aware that Frank was [$_\alpha$ sure that Joan was]]

    c. [$_\alpha$ Sure that Joan was [$_\alpha$ angry]]though Jenny was [$_\alpha$ aware that Frank was]

    d. [$_\alpha$ Aware that Frank was [$_\alpha$ sure that Joan was [$_\alpha$ angry]]] though Jenny was

Examples (7b-c) show that the phenomenon which permits an adjective phrase to occur at the left periphery of a <u>though</u> constituent is completely indifferent to whether that adjective phrase is separated from its associated auxiliary by any number of intervening adjective phrases; see the remarks of Culicover (1976) cited below. Such cases are particularly important because there is no independently motivated or visible feature picking out an adjective phrase as a candidate for such left edge positioning. This would wreck havoc with attempts (see below) to save the principle from data like (4) and (5) by limiting it to cases where some rule would potentially apply ambiguously. Examples like (7b, c) certainly represent this type of situation. Yet the construction shows no disambiguation of fronting whatever; a deeply embedded adjective phrase is just as good a candidate for fronting as a larger one containing it.

A similar logical situation is seen with English topicalization cases like:

(8)a. [$_\alpha$Robin], I love to hear [$_\alpha$ stories about].

  b. [$_\alpha$ Stories about [$_\alpha$Robin]] I love to hear.

Or:

(9)a. [$_\alpha$ That Robin seriously believes [$_\alpha$ that Leslie is a spy]], I would never have guessed.

    b. [$_\alpha$ That Leslie is a spy], I would never have guessed [$_\alpha$ that Robin seriously believes].

Negative Fronting cases in which both a fronted DP and a containing DP have the same deteminers show the same pattern:

(10)a. [$_\alpha$ Less than seven gorillas] did he purchase [$_\alpha$ less than seven carvings of]

    b. [$_\alpha$ Less than seven carvings of less than seven gorillas] did he purchase.

(11)a. [$_\alpha$ Only an even number of scientists] did they send [$_\alpha$ only an even number of carvings of] back to Joan.

    b. [$_\alpha$ Only an even number of carvings of [$_\alpha$ only an even number of scientists]] did they send back to Joan.

Further, while in general, PP extractions from PPs seem bad in English, the following similar cases are grammatical, contrary then to both the A-over-A Principle and suggestions by Neeleman and Weerman (1999: 71) that such extraction is in general excluded:

(12)a. [$_\alpha$ From any foreign store], Feinberg was ferociously opposed [$_\alpha$ to purchasing that sort of thing]?

   b. [$_\alpha$ With that instrument], they could be sure [$_\alpha$ of safely removing the bullet].

   c. [$_\alpha$ Into that bank account], Shirley had always objected [$_\alpha$ to depositing organizational funds].

Altogether, the objections Ross raised and their obvious extensions arguably reveal the A-over-A Principle to be an F-principle. They should have marked the end of this principle other than as a topic in the discussion of lessons to be drawn from failed ideas. To have reasonably avoided that conclusion would have minimally required showing how Ross's objections and their natural extensions could be met.   Instead, while never facing such genuine difficulties, NC has equally never been willing to let go of his discredited proposal; the 2002 citation in (1) and the 2005 citation in note 1 are simply the latest indications of that, as the following section documents.

2.3 Clinging to Falsehood

So Chomsky (1971: 29-30) invoked the principle (though without its name) to block the passive *The dog is believed 's owner to be hungry." There is no mention of Ross's critique.

In a popular article based on extensive interviewing, NC is quoted to the effect:

(13) Shenker (1971: 107)

> "There is a general principle that a noun phrase cannot be exctracted from another, larger noun phrase containing it."

Without any reference to Ross's critique, or any mention of problems, it is claimed the principle properly blocks examples like:

(14) What book did Mary believe the claim that John had read?

While such sentences have since Ross (1967 [1986]) often been considered ungrammatical, as by NC in this interview, many people in fact accept them; see Pollard and Sag (1994: 206-207). In any event, although the name was avoided, the A-over-A Principle was simply cited, completely

irresponsibly, to a nontechnical interviewer writing for a popular audience as an established truth of NL several years after NC had directed a thesis which showed it did not even hold for his own NL. Worse, NC went on to draw even more grand conclusions from the putative functioning of the principle, as in (15):

(15) Shenker (1971: 107)

> "First, in producing and understanding sentences we make use of abstract mental representations, such as the one indicated by the parenthesization in (1) and (2--with the further information that the parentheses in (1) bound a sentencelike element and in (2) a noun phrase. Second, we operate with general principles; for example, you can't exctract a noun phrase from within a larger noun phrase."

If one wanted to illustrate play acting at science with a hypothetical example, one could hardly make up anything clearer. But how can one avoid the conclusion that it is even worse, an instance where NC was simply *deliberately deceiving* a (non-linguist) interviewer to make it seem he had uncovered a serious principle when he had to know that he had not!

There is a particularly disturbing aspect to NC's comment in (13). The bland phrasing 'There is a general principle that...' is a formulation that is restricted in science to results so well established that attributions of authorship are considered to be superfluous. Implied is that the proposal has entered the analytic discourse of the field so deeply as to become part of the historical record of genuine discoveries, one about which no serious question of validity arises. And this fundamental status for the principle in question will be reflected in the theoretical literature, where it plays a crucial part in the contributions of innumerable physical scientists. But the A-over-A Principle was at best marginal in the theoretical literature contemporaneous with (14), except for a few isolated cases remarked on in section 2.6 below. This belies the implication of (14) that it was a central, generally accepted principle.

The dishonest content of the Schenker interview was repeated by NC in another prominent media outlet, the *New Yorker*, where, in an interview NC claimed, again without invoking the name A-over-A Principle:

(16) Mehta (1971: 54)

"Well, we transformationalists would say that the question 'What did John keep the car in?'is governed by a universal condition--undoubtedly a principle of universal grammar--that asserts that a noun phrase, here 'he garage,' that is part of a larger noun phrase, here 'he car in the garage', cannot be extracted and moved."

Evidently, by 'we transformationalists' NC did not include his recent student Ross, whose NC-directed thesis had, as already indicated, shown the 'undoubted principle of universal grammar' did not hold for English. As if to underline that it is impossible to view his irresponsible claim as some kind of memory failure, accident or slip, NC repeated it:

(17) Mehta (1971: 56)

"One such universal condition, as you noticed, is that no grammatical rule of transformation can involve extracting a noun phrase another noun phrase that properly includes it---'the car' from 'the car in the garage.'"

Inescapably then, NC simply lied to his nonlinguist interviewers Schenker and Mehta, and slightly less directly, to all of the many readers of these interviews.

Chomsky (1973 [1977a]) mentions the A-over-A Principle more than a dozen separate times. Some of these are historical and make no claim about it, rather like (1). But page 85 restates the principle largely as in Chomsky (1968) and applies it to blocking bad outputs from a partially characterized Passive transformation said to involve transformational factors of the form (X, NP, V, NP, Y). [3]

(18) Chomsky (1973 [1977a: 84-85--86])

"As an example of a possible condition on tranformations, consider the 'A-over-A'

principle, stated in (3):'

(3) If a transformation applies to a structure of the form

where a is a cyclic node, then it must be so interpreted as to apply to the maximal phrase of the type A."

About this, NC claimed:

(19) (Chomsky (1973 [1977a: 85])

"Notice that the condition (3) does not establish an absolute prohibition against transformations that extract a phrase of type A from a more inclusive phrase of type A.

Rather, it states that if a transformational rule is nonspecific with respect to the configuration defined, it will be interpreted in such a way as to satisfy the condition. Thus it would be possible to formulate a (more complex) rule with a structural condition imposing the factorization indicated by - in (4); such a rule might extract *Bill, Mary,* and *the race,* respectively. Alternatively, one might interpret the A-over-A constraint as legislating against any rule that extracts a phrase of type A from a more inclusive phrase A. The former interpretation, which in effect takes the A-over-A Condition to be an integral part of an evaluation measure, is perhaps more natural, and I will adopt it tentatively here, for this and other conditions to be discussed. Thus the A-over-A Condition as interpreted here does not prevent the application of *wh*-Movement to form (6) from (7).

(6) Who would you approve of my seeing

(7) You would approve of [my seeing who]"

NC's idea here was, evidently, that the rule involved in his (6) would involve specification that the phrase to be moved had the feature [+wh], so that it would not ambiguously apply to his (7).

But NC failed to show this idea had any application to Ross's cases like (6) or to others like (7b, c), (8a), (9b), (10b), (11b) and (12), so that the 1973 relativization which NC suggested was evidently impotent with respect to the counterexample problems in the 1967 thesis he had directed. Nor did it deal with the excess weakness facts like (4b) and (5b). His failure to mention these issues of course helped disguise the failures of his proposal.

Moreover, even if NC actually believed that the special-feature property of *Wh*-movement exempted the inner NP from the A-over-A prohibition, only a few moments' reflection are needed to reveal the factual untenability of this line of reasoning. For, contrary to the underlying descriptive assumption, it is quite possible to extract English *wh* phrases out of larger containing ones, as in (20):

(20)a. I need to know [$_{\alpha = wh+x}$ which satiric novel] the secret police tried to confiscate [$_{\alpha = wh+x}$ which edition/versions of].

   b. [$_{\alpha = wh+x}$ Which prizes] did Karim finally learn which dissidents had challenged [$_{\alpha = wh+x}$ which writers eligibility for]?

c. [$_{\alpha = wh+x}$ Which writers' eligibility for which prizes] did Karim finally learn which

dissidents had challenged?

Again, I emphasize strongly that the complaint here is not that NC advanced a factually untenable claim about syntactic theory. It is rather that he represented (most unacceptably, to *nonlinguists*) a well-discussed claim whose factual untenability had been recognized across the spectrum of theoretical debate within transformational grammar) as an established result, without qualification or caveat, treating it as exemplifying a genuine discovery of then-current linguistic science. No honest assessment of the status of the A-over-A Principle could have led to this view of it; so I see no way to avoid the conclusion that NC was deliberately falsifying the scientific status of his theoretical claims.

This same pattern of deliberate misrepresentation involving the A-over-A Principle continues through the 1970s; thus pages 86 and 87 of Chomsky (1973 [1977a]) discuss how the principle does desirable work in the description of passives, particularly, pseudopassives and take advantage type passives. Page 102 takes the principle to be one restricting the ambiguity of rule application; page 104 claims that many of the examples that fall under Ross's (1967 [1986]) Complex NP Constraint fall under the A-over A Principle. But it *fails to note* that many exmples blocked by the former, e.g. the long versions of (21), are wrongly *not* blocked by the latter, and of course, does not mention (6).

(21)a. [$_{\alpha}$ Very angry] though I believed [$_{\beta \neq \alpha}$ (*the claim) [$_{\chi \neq \alpha}$ that Sasha had been]]

   b. and [$_{\alpha}$ dash out of the factory] I was aware [$_{\beta \neq \alpha}$ (*of the evidence) [$_{\chi \neq \alpha}$ that she had]]

Page 106 talks about *extending* the A-over-A Principle to impose an additional condition about minimality of clauses. Page 109 hypothesizes about the A-over-A Principle blocking certain applications of an interpretive rule of disjoint reference called RI. Page 111 simply says flatly that 'we assume the A-over-A Condition'. Page 112 invokes it again as accounting for some cases Ross dealt with via his Sentential Subject Constraint. Page 113 note 33 talks about certain observations (not actually given) which might be handled by an appropriate (though unspecified) formulation of the A-over-A Condition. Page 122 cites the condition with respect to R1 again, treating it as a part of the theory. Page 127 note 42 says the condition should prevent the derivation of John is fun to see pictures of notwithstanding the fact that e.g. John is fun to take

embarrassing photographs of seems entirely impeccable and constitutes just as much a violation of the A-over-A Principle. Page 133 cites What did you count on your son's doing? as being a violation of the 'absolute' interpretation of the A-over-A Condition though not of the interpretation adopted 'in this article'.

Thus throughout this article, NC repeatedly invokes the A-over-A Principle. And while the text makes clear that this has at best one denotation in one context and a different one in others, he still treats it as a serious part of his linguistic framework, and with one exception, never mentions any of Ross's arguments against it. The one exception involves the unacceptable remark on page 105, which further reveals a failure to take seriously the evidence against the A-over-A Principle:

(22) Chomsky (1973 [1977a: 105])

> "Judgments are insecure, but the conclusion seems to me plausible. On the other hand, Ross(1967 [1986]) cites such examples as (89) as grammatical:
>
> (89) What books does the government prescribe the height of the lettering on ____?
>
> Examples (87) and (89) appear to be parallel from the point of view of rule applicability.
>
> I see no obvious explanation for an apparent difference in degree of acceptability."

NC's (87) were:

(23)a. *Who did you hear stories about a picture of ___?

    b. *What do you receive request[s] for articles about ___?

Several comments are in order. Least importantly, one notes the sloppiness of the page-free reference to Ross (1967 [1986]), a 300 page plus long work. Second, I doubt that (89) occurs in Ross (1967 [1986]). What does unquestionably is (6), which represents a set of counterexamples to the A-over-A Principle more extensive than NC's (89). Third, I doubt that (23a, b) are ungrammatical, though they are no doubt awkward. Better extractions from the same positions do not involve interrogatives:

(24)a. It was Ruth that they heard [$_\alpha$ stories about [$_\alpha$ pictures of ___]].

    b. It was that topic that she received [$_\alpha$ requests for [$_\alpha$ articles about ___]].

These I find to be perfect; they thus represent further sharp counterexamples to the A-over-A Principle and suggest that any contrast with NC's (89) was irrelevant to the (hopeless) status of that principle. Last, one notes the unresponsive way NC treated the problems raised by his (89). The reader gets no sense whatever that the grammaticality of such examples leaves any

contentful version of the A-over-A Principle as an F-principle. As it stands, NC's remark might suggest, quite without basis, that his (89) is little more than a curiosity which in no way interfered with his continued maintenance of this principle.

In Chomsky (1976 [1977a: 177]) it is said that the principle might be appealed to to block 'John('s) was read book' There is no mention again of the problems Ross had raised.

In Chomsky (1977b: 76) one is told "Thus one might construct a rule to 'violate' the A-over-A condition but only at a cost: the rule would have to make explicit the relevant structures so that it can apply without falling under the condition." "The logic of this approach", as noted, "is essentially that of the theory of markedness." Similar ideas are repeated on page 77. It is unclear what if any factual content is left to the principle under this interpretation; see also note 5. Page 116 claims that certain developments may undermine the argument for the relative rather than absolute interpretation of the A-over-A Principle, again indicating that this is to be taken as a serious part of NC's linguistic framework. This article too ignores Ross's critique.

Chomsky and Lasnik (1977: 429) states:
(25)

> "The theory can be constrained at the level of the base, the transformational component, the surface filters, or the interpretive rules; or by general conditions on rule application such as, for example, the A-over-A (A/A) Condition. The contribution of general conditions of the latter sort is indirect, but significant."

Page 446 of this article states:
(26)

> "We assume that this is excluded by the A/A Condition holding of (52), since these elements taken as members of the category α, are included in larger elements of some category (α being arbitrary)."

Signficantly, a footnote then says there is no particular difficulty in formulating the condition to guarantee the result. But there was evidently nonetheless too much difficulty to actually *present* such a formulation, which was not given. Raised is the issue of what Postal (1988 [2004: Chapter 9]) refers to as *the Phantom Principle Move*. In that mode, one invents a principle *name* but

either does not specify an actual principle, or specifies it only vaguely and inexplicitly, or uses the same name when convenient for *distinct* principles, all without indicating what one is doing. One then writes as if the principle name denoted a single actual principle with wide explanatory consequences. The history of the A-over-A Principle represents classic instantiations of this move. In this case, the subterfuge is, evidently, facilitated by the fact that, again, nowhere in the article are there any references to Ross's by then ten year old arguments.

Chomsky (1980a: 4) says "I assume further that movement rules are subject to the principle of Subjacency and some version of the A-over-A Principle, but I will not pursue these or other related technical questions here." This remark is notable for its technique, seen elsewhere of invoking a special variant of the Phantom Principle Move, the 'some version' variant. [4] One refers to 'some version of Principle X', where 'Principle X' is something that sounds like it could be the name of a grammatical principle. But one is careful not to specify any actual principle Since an explicit and hence testable claim is then unavailable to readers, the technique simultaneously permits both apparent grandeur of claims while guaranteeing near total security from falsification. Page 19 also invoked the principle in a way which made clear it was assumed to be part of some current framework. There was once more no discussion anywhere of Ross's criticisms.

NC's involvement with the A-over-A Principle at this stage has too a genuinely surreal quality. For the better part of the previous decade, and well into the next, his writings make frequent reference to the notion of *Subjacency*, first offered in Chomsky (1973 [1977a] as a very general explanation, ultimately subsuming many of the cases for which Ross (1967 [1986]) proposed separate constraints on extraction. Strikingly, these cases include many supposedly also handled by the A-over-A Principle! So extraction of an NP from within an NP is prohibited, in general by Subjacency. This held in virtue of the fact that when S and NP are taken to be bounding nodes (as in late 1970s 'parametric' versions of Subjacency for English), an 'internal' NP has to move past both an NP and an S node to arrive in COMP via *wh*-movement, violating Subjacency. The factual viability of the Subjacency proposal is not relevant here. What is, however, is that whatever impulses led NC to cling to the already discredited A-over-A Principle were sufficiently strong as to preclude his noticing that his newer Subjacency account of

extraction in a sense undermined it *still further* by rendering many of those correct consequences redundant. Concomitantly, unlike the A-over-A Principle, Subjacency was enthusiastically adopted by transformationalists and frequently cited in the literature to account for a broad range of data. To the extent that a restriction on movement took on the assumed status of a solid theoretical result during the decade from the middle 1970s to the publication of Chomsky (1986b), Subjacency arguably held that status in hundreds of papers, while the A-over-A Principle was invoked, even among devotees of Chomsky's version of TG, only by a handful of investigators, whose appeal to this non-result is discussed in some detail below.

Turning to Chomsky (1981a), page 212 suggests that another condition is reducible to the A-over-A condition; and page 222 refers back to discussions in Chomsky (1977a). Yet again Ross's critique of the principle is ignored.

In Chomsky (1981c: 44) the A-over-A Principle is cited as an early attempt to give general conditions explaining limitations on rule applications. Although Ross (1967 [1986]) is cited on the very next page for his notion of island, his criticisms of the A-over-A Principle are not indicated.

Chomsky (1986a: 71) remarks:
(27)

> "The A-over-A principle states that a phrase of the category A (A arbitrary) cannot be extracted from another phrase of the category A-thus barring (vii), which requires that the NP <u>who</u> be extracted from the NP <u>a picture of who</u>."

NC's (vii) was:
(28) *I wonder who a picture of is on the table
Were the A-over-A Principle relevant to a *subject* extraction violation like (28), it would of course, equally, wrongly block perfectly fine *wh* extractions from complex *object* noun phrases like (24) and (29):
(29)a. I wonder who he placed a picture of on the mantle.
    b. I wonder who he planned huge carvings of.

The fact that extractions from objects were possible had, moreover, been known to NC for years; so Chomsky (1968: 45) mentioned

(30)a. Who would you approve of my seeing?

    b. What would you approve of John's drinking?

But it is ignored eighteen years later as part of an attempt to gull a partially nonprofessional readership into thinking the F-principle has an explanatory function for (28). [5]

One notes too that contrary to the discussion of Chomsky (1973 [1977a]) quoted above, the version in (27) is absolute. Nothing in the later work reveals the fact that that at different historical points without crossreference, its author sometimes uses the name for one principle, at another point for a distinct one, in one variant of the Phantom Principle Move. Nowhere is Ross's critique mentioned, this despite the fact that the same page containing claim (27) offers some vague praise of Ross (1967).

In a 1989 interview recorded in Haley and Lunsford (1994: 135), NC claims:

(31)

> "Now in order to resolve that tension, it was very quickly recognized by about 1960, that what you had to do was show that there aren't any rules really; [6] there's no specific rule for forming questions, just a general principle. The intuitive idea is right: you take a WH-phrase and you put it in the front. But then there are conditions, universal conditions, which prevent certain things from happening. So there's the A-over-A condition, and others of a similar sort."

Here, twenty two years after he had himself directed doctoral work which showed that the A-over-A Principle was an F-principle, he again cites it. Moreover, he cites *only that* as the sort of general principle one is looking for, in an interview he knew would be part of a book designed to popularize his ideas, as an instance of one of the universal conditions of NL he has supposedly discovered, with no indication of problems, no reference to Ross's work. The interviewers add a footnote which says that the condition has been subject to 'much debate', and reference Chomsky (1972c, 1986a). But they also fail to cite Ross (1967 [1986]).

Overall then, as indicated at the beginning of this section, the reference to the A-over-A Principle in Chomsky (2002) is simply the last of a long string of citations in which, in effect, NC pretends that an idea, already shown to be hopelessly inadequate in 1967, in work he not only knew about but directed, is some sort of deep discovery about NL. One key element of this pretense has been NC's systematic failure to cite, discuss or show how one could overcome Ross's critique. Another is his appeal to variations of the Phantom Principle Move. A third is invocation of various devices, assignment of 'transparency', relative interpretations, appeal to the logic of markedness, frequent shifts back and forth between distinct interpretations and formulations of the condition given the same name, all evidently functioning to keep the putative explanatory principle from having any testable content, hence from being falsifiable. This history is a luminously clear instance of what is meant by the phrase 'NC's play acting at linguistics'.

2.4 Leading Others into Error

Given his notoriety and enormous influence on the field, one might have expected NC's decades long program -- documented above --- of pretending that the A-over-A Principle could, post-1967, be seriously posited as an element of a theory of NL to have effects on others in the field. And exactly that happened as various other writers were also led to treat it in the same unjustified way, as will now be documented.

First though, one should cite cases of the *opposite* sort. Postal (1974: 47-48 note 14) rather mildly criticized Chomsky's (1973 [1977a]) invocation of the A-over-A Principle. It stated inter alia: "In his use of a weakened version of the A-over-A Principle, Chomsky makes no attempt to deal with the arguments in Ross (1967 [1986]), which led to the conclusion that no such principle could be maintained." Culicover (1976: 280, note 5) stated: "In light of certain counterexamples to the A-over-A Principle, Ross chose to abandon it completely rather than to revise it to accommodate the counterexamples. This decision is particularly well motivated in the case of *Though* Attraction, where a violation occurs when an adjective is moved out of an S dominated by NP."

Arguably though, the best post-1967 account of the principle was that of Bresnan (1976). Bresnan presented a precise and formalized account of transformations with various novel

features which permitted her to define a variant of the principle she referred to as the Relativized A-over-A Principle, formulated as:

(32) Bresnan (1976: 16)

"No transformation T can apply to a structure φ under a proper analysis π unless π is an r-maximal proper analysis of φ for T."

Bresnan then argued in detail that her formulation correctly predicted in detail facts like those in (7) which Ross had raised as objections to earlier formulations. Bresnan's account thus explicitly had exactly those serious and aboveboard features which NC's successive references to this principle notably *lack*. So it might be considered remarkable that, as far as I know, NC never endorsed Bresnan's formulation.

However, it is worth indicating that despite Bresnan's extensive efforts to provide a serious account of the A-over-A Principle, one cannot conclude that she succeeded. The result did not, as far as I can tell, provide any motivated way of not wrongly blocking e.g. though extractions like those of (7b, c), topicalizations like (8) and (9) and Negative frontings like (11) and (11). Bresnan (1976: 14-15, note 7) seems to claim that English topicalizations (only) *appear* to violate the principle. The reason is that they are not a function of simple transformations but 'must be broken down into separate subrules of copying and deletion'. She did not elaborate this suggestion; the key issues it raised are not technical but verificational. If this option were generally available, then it is unclear why *any* construction which seemingly violates the A-over-A Principle could not be described as in her footnote, making the principle in effect almost unfalsifiable and in any event losing the distinction between different types of extraction she was alluding to. Relevantly, in recent times NC and multiple followers have, of course, claimed that all transformations are in effect of the copy followed by deletion type of complex operation; see Chomsky (1995a: 251-253).

Finally, and quite definitively, Riemsdijk and Williams (1986: 23), while overall constructing a volume designed to introduce NC's ideas of the time in an overwhelmingly favorable light, still got it right:

(33)

> "The A-over-A Principle is both too strong and too weak, that is, it excludes certain
> grammatical sentences and fails to exclude certain ungrammatical ones."

Unfortunately, a number of others influenced by NC's continuing pretense about the principle were evidently incapable of grasping the truth in (33), which was, of course, exactly what Ross (1967 [1986]) had shown.

So Kayne (1975) cites the A-over-A Principle on twenty two different pages, invoking it in particular (e.g. page 431) to explain why the French PP clitic <u>en</u> cannot link to a site inside a PP. Pages 114-115 claims:

(34)

> "It may be, though, that an even deeper level of explanation can be achieved. Specifically, this movement restriction in French would seem to be subsumed under the language-independent 'A over A' principle proposed by Chomsky, here applied to the category PP."

Kayne (1975: 115) adds a footnote noting Ross's (1967 [1986]) critique:

(35)

> "The validity of the A/A principle has, for example, been questioned by Ross (1967a), who proposes replacing it by several principles, none of which would account for the movement constraint concerning PPs just discussed."

The implication, which I see no justification for and which Kayne did not support, is that the replacement Ross advocated was *not* required, that is, that one could both accept the grammaticality of counterexamples like (6) and still maintain a contentful version of the principle.

One can put the objection to Kayne's remark (35) differently. Ross's citation of examples like (6) represent *counterexamples* to the A-over-A Principle. Unless somehow undermined, counterexamples simply show that a principle is false. But a failure to carry out an explanatory function, like that attributed by Kayne to various other principles Ross proposed has, logically, an entirely different status. While possibly construable as an inadequacy, such is entirely irrelevant to the much greater flaw which counterexamples represent. It is always possible to improve explanatory efficacy by, for instance, refinements or additional principles. But a

principle which entails a falsehood must be either eliminated or changed in such a way that it has no such entailment. Kayne's discussion seems not to have taken this fact into account.

Kayne (1975: 129) states:

(36)

> "In conclusion, then, we have shown how two otherwise mysterious facts about French syntax, the restriction on the movement of PPs and the interaction of Cl-PL and relative clauses, are explicable in terms of the absolute formulation of the language-independent A/A principle (assuming resolution of the problem of (182) and those of footnote 56)."

Claim (36) could not be true unless Ross's objections were overcome, which Kayne did not attempt. That is, an F-principle cannot valildly explicate *anything*.

McCloskey (1979: 146) note 12 suggests accounting for certain Irish facts by taking the A-over-A Principle to apply to a certain type of filter, noting that this is unorthodox and that the principle is normally only invoked when a rule can analyze a structure ambiguously. There is no mention of Ross's (1967 [1986]) critique or of any problems with the 'orthodox' view.

Lasnik (1981: 172 note 15) cites the A-over-A Principle as a possible ground for a certain blocked derivation; there is no mention of Ross's (1967 [1986]) discussion of a myriad of difficulties.

Kayne (1984) mentions the A-over-A Principle in five separate places, nowhere alluding to Ross's critique. Page (77) says 'This raises the possibility that the ECP may render the A-over-A Principle superfluous in general.' Seemingly then, even in 1984, Kayne had not recognized that Ross (1967 [1986]) had left the principle far worse than 'superfluous'.

An invocation of the A-over-A Principle especially indifferent to its truth status is found in Radford (1981). The reasons for this characterization are as follows. First, his remarks about this principle are extensive and occur as part of a long discussion of various proposed constraints on the operation of transformational rules. There is detailed and explicit treatment of several of Ross's (1967 [1986]) conditions. But there is no mention of Ross's critique of the A-over-A

Principle. The latter is stated, attributed to NC's work in the 1960s and taken to be a serious constraint.

Worse though, Radford constructs at considerable length a number of cases where the A-over-A Principle seems to fail, involving extraction of PPs out of apparent PPs, argues that it does not really fail because the constituency assumptions were wrong, and then (page 225), cites the discussion as support for the methodological point in (37) due to Chomsky (1980a):

(37)

> "Linguistics would perhaps profit by taking to heart a familiar lesson of the natural sciences. Apparent counterexamples and unexplained phenomena should be carefully noted, but it is often rational to put them aside pending further study when principles of a certain degree of explanatory power are at stake."

This was highly deceptive since by citing only *apparent* counterexamples and drawing a methodological moral, Radford gave the impression that there were no *real* counterexamples, when Ross (1967 [1986]) had already shown otherwise. In context then, Radford would have had his post-1988 readers accept the falsehood that the A-over-A Principle was a principle 'of a certain degree of explanatory power' so that while counterexamples to it should be carefully noted, they could be 'put aside'. Moreover, instead of 'carefully noting' the actual counterexamples which Ross had revealed and which are easily expanded, as done above, Radford then, as is often the case for those who talk of the importance of 'putting aside' but 'carefully noting' counterexamples to the principles they favor, *ignored them* in favor of irrelevant apparent counterexamples whose key function was to justify invocation of (37). [7]

Then Radford (1981: 226) went on to claim that the A-over-A Principle was the explanatory basis for the distinction in the paradigm:

(38)a. Which politician's book about China might they burn?

    b. *Which politician's book might they burn about China?

    c. *Which politician might they burn 's book about China?

But the only basis for this putative explanation was that in the bad cases, an NP had been extracted from one or more other NPs. If though the explanatory principle which was supposedly involved, formulated by Radford (1981: 222) as in (39), is false, no explanation can be found.

(39) No consitutuent of category A can be moved out of a larger containing constituent of category A (= of the same type)

And that is just what Ross's uncited critique had, of course, shown, decades earlier. Moreover, ignoring that, even if there were no counterexamples of the relevant sort, no explanation would have been forthcoming anyway, given the possibility of invocation by NC and his followers of always available protective devices like 'assignment of transparency', special rules subject to the 'logic of markedness', and other possibilities permitting facts of just the sort which the principle then only *seemingly* bans.

Radford's discussion, embedded in a volume explicitly designed as a laudatory introductory exposition of NC's syntactic ideas of the period, thus fully partook of the NC program of pretending the A-over-A Principle was something serious. [8]

Lasnik and Saito (1992) appeal to the A-over-A Principle to account, under Heavy Noun Phrase Shift, for the badness of a certain Heavy NP Shift structure. The account is sufficiently baroque, that I provide it in full:

(40) Lasnik and Saito (1992: 199 n14)

> "There is one further restriction on HNPS that we have not dealt with. As is well known, this rule cannot operate *successive*-cyclically. Thus, the heavy object of the embedded clause in (i) cannot escape to the higher clause to produce (ii).
>
> (i) John said [that Mary will solve all of the phonology problems] yesterday
>
> (ii) *John said that Mary will solve yesterday all of the phonology problems cf. Susan solved yesterday all of the phonology problems
>
> Particularly in light of our analysis of long-distance topicalization, this is mysterious. Why can't the heavy NP move first to the lower SPEC of CP, and from there to a position in the higher clause? Here, we offer a conjecture. Suppose that "heaviness" is truly a feature relevant to the operation of this process. Then, it is conceivable that when a constituent crucially possessing this feature moves to SPEC of CP, the CP itself acquires the feature via SPEC-head agreement and upward percolation of the features of the head. The resulting configuration has one [+heavy] constituent contained within another. The next step of the derivation, rightward movement to the ultimate landing site, now would

see two potentially movable [+ heavy] phrases, the CP and the NP (assuming, as seems reasonable, that HNPS, despite its customary name, is not limited just to NPs). But then, the A-over-A constraint will precisely prevent the process from moving the NP."

Notable about this analysis, beyond its unique and ad hoc posit of the feature [+heavy], a special assignment of this feature to CPs and appeal to the A-over-A Principle, is that nowhere in the whole book is any actual A-over-A Principle stated or even referenced. So this invocation of the principle instantiates nicely, inter alia, the Phantom Principle Move in a fairly pristine form. Further, if there were a viable A-over-A Principle and it blocked (ii) of (40) in the way described, it would also of course block left extraction from the same position and falsely predict that e.g. (41a, b) are ill-formed: [9]

(41)a. Those nine unusually hard phonology problems, John said that Mary will easily solve.

    b. None of those nine unusually hard phonology problems did John say that Mary will easily solve.

Napoli (1993: 425-426) claims:

(42)

    "Another very important constraint, which was sometimes called a principle, sometimes a condition, and sometimes a constraint, is known today as the A Over A Principle."

Napoli goes on to observe that the principle is still invoked today in one form or another. Ross's critique is not mentioned, although it showed of course that the idea was anything but 'very important'.

A genuinely outrageous discussion of the A-over-A Principle is found in Smith (1999), a largely unconstrained hagiographic account (self-described by Smith to me in correspondence) of NC's ideas. After giving (page 63) a version of the principle from Chomsky (1964a), he claims:

(43) Smith (1999: 64)

    "But strikingly, it is not possible to question the subparts of these Noun Phrases, even though they are themselves Noun Phrases, as can be seen by the impossibility of the examples in (29):

    (29) a. What did Harry stir the stew and - ?

b. What did Harry stir - and the pudding?

c. What did Harry stir the stew that tasted of - ?

These examples may seem unimportant, but their significance resides in the fact that they illustrate a general property of language, not just an idiosyncrasy of one rule of English. All rules in all languages obey the A over A condition, as you can test by trying to translate the examples in (29) into your favorite language."

So in a work aimed largely at nonprofessional readers, Smith claims absolute universal validity for a principle shown thirty two years earlier by Ross (1967 [1986]) not even to hold for Smith's own NL.

Smith's choice of examples like his (29a, b) to putatively illustrate the functioning of the A-over-A Principle should be shocking. While Ross's critique is not mentioned and Ross is not listed in his index (although, oddly then, Ross (1967 [1986]) is listed in Smith's (1999) bibliography), cases like his (29a, b) are, of course, of the sort which Ross (1967 [1986]) ultimately claimed were blocked by the Coordinate Structure Constraint. As indicated in section 1, his unchallenged reasoning for that conclusion was that while the A-over-A Principle might be taken to block cases like Smith's (29a, b), it failed for all the equally bad cases where a constituent of type β was extracted from a coordinate phrase of distinct type α, which the A-over-A Principle was helpless to block, as in (44).

(44)a.*[$_\alpha$How long] did Mary [$_{\beta \neq \alpha}$ stir the stew for an hour] and [$_{\beta \neq \alpha}$ blend the pudding -]?

b. *[$_\alpha$How long] did Mary [$_{\beta \neq \alpha}$ stir the drinks -] and [$_{\beta \neq \alpha}$ blend the pudding for an hour]?

c. And praise Mary, Kenneth will.

d. *And praise Mary, Kenneth will and may criticize Sue.

e. *And praise Mary, Kenneth may criticize Sue and will.

Thus only by ignoring Ross's thesis work, which the person his volume is designed to honor had directed, can Smith offer his (29a, b) as support for the fanciful A-over-A Principle. One must note too the regrettable fact that the revised version of Smith (1999) released as Smith (2005), which talks (page xi) of having corrected mistakes contains the same incorrect claims (e.g. page 60; see also pages 91, 93).

One must note too in (43) the special illogic of the suggested method of 'testing' (that is, confirming) this strongly proclaimed universal via the 'translate the examples into your favorite

language' move. This is supposed to suggest, one gathers, that since the principle is a universal truth, one can choose any arbitrary language to test its veracity. But the test is useless since it can trivially justify endlessly many false universals. Consider, for instance, claim (45a):

(45)a. No language has object pronominal clitics.

    b. The English language does not have object pronominal clitics.

Via ordinary predicate logic, (45a) entails (45b). So if (45a) is true, as Smith assumes the A-over-A Principle to be, then it explains e.g. why (46a, b) are bad:

(46)a. *Jones it-has said.

    b. *Mary (h)im-loves.

To confirm the validity of (45a) via Smith's methodology, it suffices then to pick one's favorite NL, say German, and give translations of (44a, b) therein. The results are parallel to (44):

(47)a. *Jones es hat gesagt.

    b. *Mary ihn-liebt..

Hence according to Smith, (45a) should be confirmed. The problem is that this 'result' was dependent on the choice of favorite NL. Had I chosen Spanish or French, where the translations of (44) are both good and involve object clitics, the result would have contrasted. Needless to say picking an arbitrary NL which is consistent with, or which even supports, an arbitrary grammatical principle cannot in itself support a claim that all NLs or all rules in all NLs obey it. Smith's confirmational assumption essentially ignores the whole issue of how one can ascertain that a putative universal is such. That is, his discussion highlights what little role systematic consideration of sampling, etc. plays the kind of linguistics at issue here in considering the viability of universality claims. Only in an intellectual environment where such issues hardly arise could one publish claims about supporting universal claims by picking a favorite language.

There is another issue. Even if one found that in a thousand NLs parallels to Smith's (29a, b) were ungrammatical and that in no known case were such parallels grammatical, that could hardly as such support the A-over-A Princple. For Smith's methodology ignores the fact that such cases as his (29a, b) are *also* blocked by partially competing principles, like Ross's (1967) Coordinate Structure Constraint. Thus even success on a wide scale of the sort of 'test' he proposes would not do what he claims. Needed minimally in addition would be an argument that

chose the A-over-A Principle over the Coordinate Structure Constraint for such cases. Not only does Smith provide none, he of course fails to mention the fact that Ross (1967 [1986]) had given an argument *showing precisely the opposite*, based as already indicated, on cases like (44), where an α is extracted from one conjunct of a coordination of βs.

The author of (43) continues:

(48) Smith (1999: 64)

> "This generalization turns what had been a descriptive problem into an explanatory solution. The assumption is that when children are working out what the rules of their first language are, they can ignore a whole host of alternatives which are logically possible but linguistically excluded by universal principle. The universality of the principle suggests that it is part of the mental architecture the child brings to bear on the language-learning task, and is not something it has to learn."

So here Smith tries to lead inter alia many nonprofessional readers to believe that a thirty year plus old falsehood not viable even for his own NL not only provides an explanatory solution to certain facts about English but is, grandly, part of the 'mental architecture' each child brings to the task of learning an NL. One might have thought that a linguist making such grandiose claims would have at least tried to test them again his own language, by reading and taking seriously, for instance, earlier work on the topic like Ross (1967 [1986]). But one would have been wrong.

I have appealed to a notion of play acting at linguistics. Smith's (1999) account of the A-over-A Principle is a particularly clear instantiation of the intellectually toxic combination of inadequate ideas and missing professional standards which that dishonorable activity represents. And again, the dreadful level of scholarship of his account is unimproved in the 2005 version (pages 60-61).
10

Lasnik (2000) mentions the A-over-A Principle on eight different pages, never gives a precise formulation but makes clear it is taken to be a serious candidate for inclusion in linguistic theory. Ross's (1967 [1986]) critique of the principle is unmentioned as are any other problems with it. Particularly awful about this work is page 91, which states:

(49)

"In such cases Chomsky observed that many operations that do something to an NP will only do it to the one that's higher. Trying to apply the operation to the embedded NP gives a bad result. One possible case of this, discussed in great detail by Ross (1967), involves examples like these:

(113) John and Mary, I like.

(114) *Mary, I like John and.

Here we see that if Topicalization applies, it can move the 'bigger" NP *Mary and John,* giving the acceptable result in (113), but if it moves the 'smaller' NP *Mary* (which was part of the bigger NP), the resulting structure in (114) is bad. Thus, if the A-over-A Constraint is taken in a totally general way and if we anachronistically apply it to the analyses in (112a) and (112b), then we have to conclude that (112a) is the correct analysis."

Remarkably, although Ross (1967 [1986]) is cited, the text completely ignores what he said about the ungrammaticality of examples like those at issue, namely, that they were functions of the Coordinate Structure Constraint, not the A-over-A Principle. Some later work argued that Ross's combination of the constraint against extracting conjuncts with that banning extraction of parts of conjuncts was wrong; see Grosu (1973) for arguments that the constraint against extracting conjuncts is independent. But that would still not justify a current attempt to invoke the A-over-A Principle for such cases. For, as already observed in connection with Smith's discussion, conjunct extraction is impossible even in those cases where the conjuncts appear to be of different categories:

(50)a. (They said that) Wilma was tall and a terrific ping pong player.

   b. *Tall though Wilma was and a terrific ping pong player,

   c. *And a terrific ping pong player they said that Wilma was tall and

Hornstein (2001: 5) cites (without justification in my opinion) the A-over-A Principle as a forerunner of the sort of economy appeals typical of minimalist work, and speaks of 'reconceptualizing' this and other conditions in least effort terms. There is no hint of Ross's critique or of any other problems with the condition.

Overall then, it is clear that in numerous cases, followers of NC and enthusiasts for his ideas have up until recently continued to cite and appeal to the A-over-A Principle as if it were a viable part of linguistic theory. Most often they do this, just as NC has mostly done from 1972-2005, without even mentioning Ross's (1967 [1986]) critique of the principle and uniformly without attempting to show how that critique could be circumvented. Equally importantly, there is no indication that any of the proponents of the A-over-A Principle have made even a casual attempt to test it against a reasonably broad range of facts. Cases which show nothing other than the existence of *some* restriction, which might be the A-over-A Prinicple or some other conceivable conditions, are cited without discussion as confirmation of a hypothesis for which a large body of counterevidence is easily assembled apart from what was already on record in Ross (1967 [1986]). Evidently, this is anything but the way scientific inquiry or even decent scholarship is supposed to proceed. But it is exactly what one would expect of *play-acting at scientific inquiry/linguistics*.

2.5 The Bad Drives Out the Good

There is a still different perspective from which to consider NC's continuing invocation of the failed A-over-A Principle as a part of his putatively universal linguistic theory of the moment. As already multiply touched on, one of the elements which Ross (1967 [1986]) was led to posit as inter alia a replacement for the A-over-A Principle, was, of course, his *Coordinate Structure Constraint* (CSC), which barred extraction of a conjunct of a coordinate structure or the extraction of any element from a coordinate structure. [11] While a proper formulation of this condition arguably remains obscure, hardly any syntactician can doubt that the CSC represents a genuine insight into grammatical structure. [12] Notably, as already mentioned, in a variety of cases, the CSC idea succeeds in range of cases where, the A-over-A Principle sharply fails, e.g.:

(51) *[$_\alpha$ How long] did Nora learn that [$_\beta$ the Queen Mary was a thousand feet long] and [$_\beta$the Titanic was]?

So the CSC rightly blocks (51), which no version of the A-over-A Principle can.

Despite this, and despite documentation of the numerous and continued invocations of the A-over-A Principle by NC, in general NC *studiously avoids citing the CSC*. So it is e.g. unmentioned in the indices of any of Chomsky (1977a, 1979b, 1980b, 1982b, 1984a, 1986a, 1986b, 1988a, 1995a, 2000c, 2002, 2004). I believe it is also unmentioned in Chomsky (1971,

1975a, 1982a), although here it is hard to be as certain, since NC did not bother to provide these volumes with general indices. In any event, Ross is not listed in the references of the first and third of these volumes. In Chomsky (1975a), it would have been particularly appropriate to mention the CSC on pages 92-93, which reference Ross's 'very illuminating study of 'island constraints'', and which then go on to give some putative general characterizations of unbounded phenomena.

This failure to cite the CSC is remarkable, the more so in context with what became at an early point in NC's career an almost total avoidance of the facts of coordination. [13]   Note that NC's works cited above as failing to cite the CSC in general fail to index coordination/conjunction either. Since the A-over-A Principle is an F-principle and the CSC an enormously robust and vastly more defensible one, not only is there no *intellectual basis* for why in repeated free choice situations where his only goal has been to cite some presumably valid universal principle(s), NC so often picked the failed principle and never the much more correct one, such a pattern lacks any rational scientific basis. But NC's behavior with respect to the CSC and A-over-A Principle is entirely comprehensible if one supposes that this *intellectually* indefensible choice of the worse over the better is simply self-promotion. For the A-over-A Principle was unquestionably entirely NC's and the CSC was equally unquestionably entirely due to Ross. Apparently that was enough to drive NC to repeatedly cite the F-principle and to avoid mention of the objections to the former or the existence of the latter.

Despite what was just said, I am aware of two instances in which NC *does* cite the CSC. But examined in detail, these turn out to support the ugly conclusion just drawn, not contradict it. One is in Chomsky (1981a: 279, note 8). [14] The only function of the mention in NC's note 8 is to indicate that some special posited logical form WH rule, said not to obey most conditions on syntactic rules, in fact obeys the CSC. The other citation is in Chomsky (2000a: 55-6). This is a totally reactive criticism of certain remarks about the condition by the philosopher W. V. Quine. The CSC is characterized by NC not as a theoretical insight (e.g. like the A-over-A Principle so often is by NC) but as a 'descriptive generalization'. The reason these rare (for NC) citations support the conclusion of the previous paragraph is that beyond denigrating the condition as just described, in neither case is Ross mentioned, still less credited with proposing the CSC. His

name does not even appear in the index or references of Chomsky (2000a) and the three citations in Chomsky (1981a) credit Ross with nothing of substance. So, as far as I am aware, NC's total life long treatment (up until 2005) of arguably the most robust condition on extractions ever proposed amounts to mentioning it only twice (once in denigrating it), and then therein failing to credit or mention its developer. [15, 16]

One should comment further on the characterization of the CSC in Chomsky (2000a: 55-56). Claiming that this was a 'descriptive generalization', with the reader evidently invited to understand '*merely* descriptive', was a petty, mean spirited and entirely unfounded putdown of a principle whose logical status is exactly that of the A-over-A Principle and other conditions of his own which NC has, of course never belittled in this way. The only differences are that the A-over-A Principle was invented by NC and fails even for English, while the CSC was proposed by Ross and has proved to be robust across attested NLs. Moreover, the same gratuitous unjustified simultaneous self-promotion of NC's ideas and disparaging of Ross's is repeated still more recently:

(52) Chomsky (2002: 129):

> "When the tension between descriptive and explanatory adequacy came up, there were several approaches; one approach, which is in 'Current Issues in Linguistic Theory,' was to try to find principles like A over A, actually also the *wh*-island was in there, and a couple of other things; the other approach was to give a taxonomy of properties, that's basically Ross's dissertation, a taxonomy of islands."

Here NC draws an intellectually completely groundless, unjustified and entirely illusory distinction between e.g. his posit of the A-over-A Principle and Ross's posit of his island constraints, belittled here as a 'taxonomy' although the two have in fact the same logical status with respect to data, individual grammars and linguistic theory.

The unjustified demeaning of Ross's proposed island constraints appears again in Chomsky (2005a), where it is said:

(53) Chomsky (2005a: 7)

> "later John Robert Ross's (1967) classic study of taxonomy of islands that still remains a rich store of ideas and observations to explore."

The characterization as 'taxonomy' and talk of 'ideas and observations' contrasts with NC's consistent reference to his own notions, like in particular the A-Over-A Principle, as explanatory principles. But there is no logical difference between NC's proposed principles and the island conditions in Ross (1967 [1986]). The latter were no more and no less 'taxonomic' than NC's principles and went far beyond mere 'ideas and observations'.

The latter conclusion is relevant for the following reason. Readers, especially nonlinguists, should understand that for NC, 'taxonomy', 'taxonomic' are not merely descriptive. Rather they are used to differentiate an approach seeking sophisticated explanatory accounts (the description NC invariably gives of his own goals) from supposedly more limited and theoretically uninteresting ones content to merely collect and classify data. See e.g. Chomsky (2004: 68, 94). Thus NC's invocation of taxonomy in connection with Ross's work was intended to suggest, without basis, that it was as such part of an activity having distinct theoretical status than his own, an approach with far more limited goals and one he clearly views as of enormously less value. The point is nicely expressed by Mark Liberman (http://languagelog.ldc.upenn.edu/nll/?p=3180): "The other argument has to do with the methods of science: Chomsky argues for 'very intricate experiments that are radically abstracted from natural conditions'. His disdain for mere description ('butterfly collecting', as he often calls it), and especially for 'observations of things in their natural state', is well known. You can see it in the short passage quoted above, and if you read the rest of the transcript of his NELS 41 lecture, or his other works such as *Linguistics and Brain Science*, you'll see that it's a recurring theme."

But, since the logical distinction between NC's own principles like the A-over-A Principle and the CSC is nonexistent, the cited references to Ross's work amount to mere puffing up of NC's own supposed contributions at the expense of distorting someone else's, the whole petty dishonest exercise made especially repugnant by the fact that the latter was one of his students. As a measure of the extraordinary nature of this behavior I invite the reader to seek out other cases where professional linguists go out of their way to gratuitously and falsely denigrate the work *of one of their own students* just to make their own seem more important. I predict the task of finding such will be onerous at best.

2.6 The Nature of the Literature

A final remark about NC's post 1967 treatment of the A-over-A Principle is appropriate. If one examines those works I have cited in which NC remarks about this principle during the period, one finds a clear generalization. All the accounts are brief, piecemeal and anecdotal. There is no extended discussion of the claim, no monograph, no article devoted to stating a precise version and justifying it, no elaborated attempt to deal with the variety of known counterexamples and exceptions. Rather what one finds is a remark here, a remark there, all scattered in larger works devoted to a variety of problems.

Arguably, this unfocused nature of the treatment of the A-over-A Principle is one reason why NC has been able for so long to successfully advocate and promote such a bankrupt idea. A full scale article or monograph devoted to the topic could not have failed to attract the kind of attention the principle cannot bear and would have made it nearly impossible to ignore and obscure its inadequacies.

I suggest too that the treatment of this principle in NC's work is not at all atypical. While I cannot elaborate this judgment here, a parallel point is made in Postal (2004, Chapters 7 and 8) for NC's historical record with respect to the strong crossover phenomenon and passives. In these cases and in others too, I suggest, it is impossible to find a focused, systematic treatment in a single work.

To conclude this section, the history of NC's involvement with the A-over-A Principle is a paradigm case of play acting at linguistics. While the original postulation of such a principle may have been an aspect of genuine inquiry, from the point of Ross (1967 [1986]) on, talk of the A-over-A Principle was mostly disgraceful, self-promotional pretense, scorning any element of genuine integrity.

Section 3 Recoverability of Deletion

3.1 Nonuniqueness

The disreputable character of NC's decades-long invocations of the A-over-A Principle, documented in section 1, is in no way atypical of his linguistics. Much the same points can be made by consideration of other ideas of his. I will illustrate this in detail for one further instance

by considering NC's repeated invocation of something called the *Principle of Recoverability of Deletion*. As it turns out though, where the A-over-A Principle shows up to a significant extent as a *relatively* clear claim which (if unhedged to the point of emptiness) is just false, that is, is an F-principle, even for English, NC's talk of recoverability of deletion mostly involves after the mid 1960s a phantom principle, a name forlornly in search of a never found denotation.

3.2 Early Invocations

This idea seems to have first emerged in the following:

(54) Chomsky (1964b: 41)

> "This observation suggests the following general condition on transformational grammar. Each major category has associated with it a "designated element" as a member. This designated element may actually be realized (e.g., *it* for abstract Nouns, *some (one, thing))*, or it may be an abstract 'dummy element'. It is this designated representative of the category that must appear in the underlying strings for those transformations that do not preserve, in the transform, a specification of the actual terminal representative of the category in question. In other words, a transformation can delete an element only if this element is the designated representative of a category, or if the structural condition that defines this transformation states that the deleted element is structurally identical to another element of the transformed string. A deleted element is, therefore, always recoverable."

Several points are apparent. First, there is some attempt here to actually specify a principle; if the history of recoverability was no worse than this, talk of play acting would not be appropriate in connection with this idea. But, second, the notion 'recoverable', which the principle was intended to reconstruct, is not defined. It would appear that the idea was that given an input structure (tree) S_1 and a transformation T which operates on S_1 to yield S_2 by deleting a constituent C from S_1, that somehow the principle would yield an algorithm A with the following property. A takes as input pairs like {T, S_2} and yields C, or equivalently perhaps, yields S_1. [17] In order to reach the goal of formulating such an algorithm, (54) provided a binary disjunctive condition: what was deleted had to be a designated element of a category or had to be represented by T as structurally identical to some other element of S_1. One's immediate inclination is to focus on the undefined and otherwise inadequate character of the notion of

structural identity. So since in very early transformational grammar, control constructions like (55a) were instances of deletion, the identity condition would nonetheless fail to prevent (55b) from being derived from the semantically distinct (55a), given that the quantificational expressions here are 'structurally identical':

(55)a. Every doctor expected to attend the seminar.

   b. Every doctor expected every doctor to attend the seminar.

However, even if a perfect solution were available for the required identity notion, (54) would still in no way yield an algorithm of the implied sort. To see this, assume that <u>something</u> is the designated element of the category inanimate NP and <u>someone</u> is the designated element of the category animate human NP and that <u>such</u> is the designated element of the category adjective. Suppose then there are three transformations, T_1, T_2, and T_3, each of which deletes one of the designated elements in the context [I regard NP as ___], converting (56a, b, c) all to (the irrelevantly ungrammatical) (56d):

(56)a. I regard that sort of thing as something

   b. I regard that sort of thing as someone

   c. I regard that sort of thing as evil.

   d. I regard that sort of thing as.

The fact that English has no rules like T_1, T_2 and T_3 and that (56d) is ungrammatical is irrelevant. The point is that the 'recoverability' principle will fail to permit unique reconstruction of the deleted element in any context where more than one deletion rule could have operated. There is another evident issue. The algorithm I have sketched takes as input a pair of a structure and a transformation. Viewed from e.g. a parsing perspective, which is what the term 'recoverability'suggests, it is entirely unclear how, given an input sentence and a grammar, one would choose the appropriate T as input to the putative algorithm.

Only a short time later, NC gave a somewhat different formulation:

(57) Chomsky (1965: 144 -145)

> "We are proposing the following convention to guarantee recoverability of deletion: a deletion operation can eliminate only a dummy element, or a formative explicitly mentioned in the structure index (for example, *you* in imperatives), or the designated

representative of a category (for example, the *wh*-question transformations that delete Noun Phrases are in fact limited to indefinite Pronouns __ cf. Chomsky, 1964, § 2.2), or an element that is otherwise represented in the sentence in a fixed position. To clarify the latter point further, let us define an *erasure transformation* as one that substitutes a term X of its proper analysis for a term Y of its proper analysis (leaving X intact), and then deletes this new occurrence of X which replaced Y. In the example of relativization discussed earlier (pp. 128 f.), if we have the string

   1   2   3   4

(8) the man - [#wh- - the man - had been fired#] returned to work

the relative transformation can be formulated as an erasure operation that substitutes the first term X of the proper analysis for the third term Y, erasing the latter in the process. Avoiding details of formalization, which are straightforward within the general theory of transformations, we may say briefly that the erasure operation *uses the term X to delete Y* in such a case. We say, then, that an erasure operation can use the term X to delete Y just in case X and Y are identical. We shall investigate the exact nature of the required relation between X and Y somewhat more fully in Chapter 4, PP. 177f."

First, remark (57) assumes, falsely, as seen in connection with (54), that there is some clear notion of 'recoverability' which can or must be guaranteed. The same assumption is seen earlier in the volume (1965: 222, note 1), which states: 'There is in fact good reason to require that only 'recoverable deletions' be permitted in the grammar.' Second, without explicit note, the binary disjunctive formulation of (54) has been replaced with a quaternary disjunctive statement. Third, the principle appeals to a notion of 'dummy' element which is not defined. The problems raised in connection with (54) were then clearly not addressed in (57). Fourth, there is what became a common type of promissory note in NC's writings, a claim that something was not hard (NC's 'straightforward') to formalize, given in the absence of any such formalization or any reference to a work containing such. Obvious questions related to play acting arise about such remarks. If NC had *not* constructed the appropriate formalization, how could he have justifiably claimed that doing so was feasible, still less straightforward? And if he had, why did he not present the result? These questions suggest that such remarks are largely *bluff*, albeit over time quite successful bluff.

On the contrary, NC did recognize the need to consider the identity relation appealed to, to which he returned later in some detail. One need not consider that, for deletions subject to some sort of identity raise the same issue for algorithmic reconstruction of deleted material as do designated elements. To see that, assume that VP deletion constructions involve some sort of identity, which includes a formal representation of anaphoric relations. Then the deletion should yield (58c) from both (58a, b) in order to capture the well-known strict/sloppy identity ambiguity of such cases:

(58)a. $Andrea_1$ tickled her_1 cousin but $Irene_2$ didn't tickle her_1 (cousin).

　　b. $Andrea_1$ tickled her_1 cousin but $Irene_2$ didn't tickle her_2 cousin.

　　c. $Andrea_1$ tickled her_1 cousin but Irene didn't VP.

The question of whether such deletions ambiguously yielding (58c) would be recoverable or not is unanswerable, as the notion is not defined.

The issue is significant in showing the lack of factual depth and seriousness of early discussion of recoverability. For if the referential status of the pronouns in (58) is irrelevant to the hypothetical identity condition, then 'strict identity' has to mean something like formal or morphological identity, with logical components irrelevant. Only ignoring the coindexation in (58) would seem to allow the ambiguous interpretation (58c) instantiates. But example (55b) given earlier points in the opposite direction. For there, while the two tokens of every doctor are indeed morphologically identical, deletion 'under identity' would give rise to a nonexistent reading. Given the assumptions of the time---that semantic relations are entirely encoded in deep-structure representations---surely this apparent clash between cases where the denotational properties of forms either must be or must not be analyzed as satisfying 'recoverability' raised unanswered questions which NC's work at this time appeared to overlook or ignore.

Summing up, the two earliest of NC's introductions of recoverability with which I am familiar, in the 1960s, were faced with unsolved and partially unacknowledged problems, and already tainted with dubious characteristics.

3.3 Recoverability in the 1970s

After Chomsky (1965), there seems to have been a hiatus in which talk of recoverability faded…it is, for example, not mentioned in the index of Chomsky (1972a). But it returns in Chomsky (1977a). Page 84 mentions earlier attempts to constrain transformations and cites it as well as the A-over-A Principle. Page 128 note 43 cites it as the basis of an explanation:

(59)

> "If the subject position of the embedded sentence is filled by a lexical item, then the general condition of Recoverability of Deletion will block the rule of PRO-Replacement."

Here NC uses a capitalized expression, indicating a proper name of some principle, but no principle is given or referenced. Thus begins a clearly unacceptable modus operandi instantiating the Phantom Principle Move. This is reinstantiated on page 174 of the same work, which states:

(60)

> "By general conditions on recoverability of deletion (the correct formulation of which is a nontrivial matter; cf. Peters and Ritchie (1973)), the second NP can move only to an NP position that is empty of any lexical material."

Again there is no formulation or reference to such. Moreover, the proper noun term in (59) is replaced by one without caps, and it is pluralized. Is the reference on page 128 to the same thing(s) as that on 174, and what is that thing or those things? There is no way to tell, but NC is unembarrassed by taking such ungraspable elements to have explanatory functions. I take the difference to unintentionally reveal both the lack of any actual principle and that NC was engaged in play acting at linguistics.

The Phantom Principle approach continued and was heavily expanded in the same overall time period:

(61) Chomsky and Lasnik (1977: 446):

> "Suppose that we were to apply (52) to delete the full *wh*-phrase in (51b) or (51c). We assume that this possibility is excluded by the recoverability principle for deletion."

No principle is stated or referenced. Instead the authors wrote:

(62) Chomsky and Lasnik (1977: 447)

> "Exactly how to formulate this principle is a nontrivial question, but there is little doubt that such a principle is required and at least some of its properties are clear. In particular,

items from the lexicon cannot be deleted unless they are explicitly mentioned in the deletion rule."

Notable of course is the Phantom Principle Move: something is 'explained' on page 446 by a principle neither given or referenced; moreover, on the next page it is in effect admitted that no particular principle actually exists. So NC referred to 'such a principle' and stated that actually giving a formulation would be nontrivial. In how much real inquiry are things said to be explained by principles which are admitted to be nonexistent though implied to be formulable if that were truly necessary?

And then:

(63) Chomsky and Lasnik (1977: 448)

> "We may assume, then, that an appropriate form of the recoverability condition will prevent deletion of the quantifier-like *wh*-word, with its intrinsic semantic content, but not the wh-form that appears in relatives, which simply marks a certain category."

The wording in (63) represents another classical Phantom Principle invocation. Talk about 'an appropriate form' of some ungiven condition preventing something and the free will 'we may assume' indicate pretty directly that one is the world of make believe. And there is more in the same vein:

(64) Chomsky and Lasnik (1977: 447, note 46)

> "There is a residual semantic content in relative pronouns, namely the feature Human (*the man who I saw *the book who I saw*). But this (or any) residual semantic content is redundant, since it is expressed in the head of the construction. We assume that an appropriate concept of recoverability will be restricted to lexical items, ignoring such redundant features. Note that if we accept a raising analysis of relatives, as in Vergnaud (1974), then the lexical elements within the *wh*-phrase have been moved by a transformational rule to the position of the head, leaving only *wh* and a trace along with redundant features. The recoverability condition will not apply to the *wh*-word, now devoid of semantic content. These remarks apply only to restrictive relatives. In appositives, a raising analysis is inappropriate and a full NP with lexical content remains in the *wh*-phrase. This explains the fact that deletion of the *wh*-phrase is impossible in appositives."

Again one finds the 'we assume' talk about an ungiven principle, mention of appropriate forms of that, and despite all that, the authors claim to know what the principle will apply to and are unconstrained in claiming that the nonexistent principle *explains* something. The difference between this sort of let's pretend writing and anything that could be called science could hardly be more apparent.

In such remarks one sees a remarkably clear evolution away from the original at least in part arguably serious attempts in the 1960s to give actual principles and toward appeal to the Phantom Principle Move. Where in spite of problems, Chomsky (1964b, 1965) at least attempted to spell out some condition, by the mid 1970s, as seen in (56), talk of recoverability is entirely reduced to dreaming about unspecified conditions persuasively characterized in various ways designed to soothe accepting the nonexistent as real. And repeatedly, the Phantom principle is invoked as part of supposed explanations of one or another state of affairs. [18]

3.4 Recoverability in the 1980s

The Phantom Principle approach continued into, and flourished during, the 1980s:

(65) a. Chomsky (1980a: 6)

"Deletion is governed by a principle of recoverability, the exact nature of which is a nontrivial matter, discussed in the references cited and elsewhere."

b. Chomsky (1980a: 21)

"In C&L, we suggested that a proper formulation of the condition of recoverability of deletion should account for these facts. In (59), *who* has semantic content: it corresponds to a quantifier, under natural rules of interpretation, as in Chomsky (1977a,b). In (60), it is devoid of semantic content. In this case, stress corresponds to semantic content and immunity to deletion. While it remains to develop the technical details, I think that this is the right approach."

So, at this point, then sixteen years after initially invoking the idea, not only has no improvement been made, but, despite frequent putative explanatory invocations, the principle is admitted to be technically undeveloped and again to have a 'nontrivial exact nature'.

A major deposit of let's pretend appeals to something called recoverability is found in Chomsky (1981):

(66)a. Chomsky (1981a: 46)

"But any reasonable version of the principle of recoverability of deletion will require that arguments cannot be erased by substitution; in fact, the target of movement can only be $[_\alpha$ $e]$ lacking an index, a non-argument. Hence (17ii) follows from the projection principle and the principle of recoverability of deletion."

b. Chomsky (1981a: 65)

"(5) Avoid Pronoun

Thus in (4i), where PRO may appear, the overt pronoun is taken as distinct in reference from *John;* but in (4ii), where PRO may not appear, the overt pronoun is free in reference. Principle (5) might be regarded as a subcase of a conversational principle of not saying more than is required, or might be related to a principle of deletion-up-to-recoverability, but there is some reason to believe that it functions as a principle of grammar."

c. Chomsky (1981a: 87)

"Let us examine the possibility of taking there-insertion to be a perfectly free and independent rule. We can appeal to the principle of recoverability of deletion to ensure that there will only be inserted in the position of an empty category."

d. Chomsky (1981a: 203)

"(44) *who did you give [pictures of to t'

Suppose *(44)* to have been derived by wh-movement from the position of *t,* to the position of *t* (or conversely), and then to the matrix COMP position, yielding the interpretation: 'for which person x, you give pictures of X to x.' There is no semantic constraint against this interpretation; nevertheless, it is not an interpretation assigned to *(44),* which is ungrammatical. The binding theory is not violated by the structure *(44).* The operator who binds the variables *t* and *t',* but neither variable binds the other, so that condition (C) of the binding theory is not violated. But the θ-criterion is violated if *(44) is* derived in the manner just described. Since the variables are arguments, they must appear in θ-positions. But at least one of these positions must be a non-θ-position since it is filled by a non-argument - in fact, $[_{NP}$ *e]* - *at* D-structure, or the derivation will violate the recoverability condition, which in this case guarantees that D-structure is an accurate characterization of GF-θ. But this is a contradiction."

e. Chomsky (1981a: 241)

"To begin with, let us assume - ...- that the parameter involves the inflectional element INFL, or more precisely, the agreement element AGR (= PRO) that is the crucial component of INFL with respect to government and binding. The intuitive idea is that where there is overt agreement, the subject can be dropped, since the deletion is recoverable."

f. Chomsky (1981a: 276)

"The Avoid Pronoun principle operates uniformly, permitting empty subjects where the element AGR is sufficiently 'strong' to allow recoverability (only a tendency, as noted). Correspondingly this principle will allow the NP associated with the clitic to be empty but not an NP associated with no clitic, as in (2). In this manner, we might hope to incorporate a fairly general principle of recoverability within the present theory, dealing with problem *4.4.(2iv)*."

Claim (66f) in effect tells it all, making it explicit that recoverability is not an actual principle but a mere hope. Despite appeal after appeal to the notion for the better part of two decades at this point, the book nowhere spells out an actual principle or references one which could do the work that is being claimed but on the contrary makes explicit that there is no actual formulation of 'recoverability of deletion' -- and this despite repeated claims, cited above, that such a formulation is not only possible but will have certain specific effects!

The same pattern is seen in the mid 1980s:

(67)a. Chomsky (1986a: 70-72)

"A Principle of recoverability of deletion states that an element can be deleted only if it is fully determined by a structurally related phrase containing its lexical features or if it is a 'designated element'."

b. Chomsky (1986a: 179)

"We may assume that the expletive α can be eliminated in accordance with the condition on recoverability of deletion, only if α is replaced by a co-indexed element β, hence by movement of β to the position occupied by α, forming a chain (α, e)."

Notably, without reference, the formulation of 1965 is ignored and (67a) seems closest to that of 1964. No improvement is found twenty-two years later and in fact (67a) is arguably vaguer and

less developed than the 1964 version. The terminology 'we may assume' in (67b), seen in an earlier NC remark, once more shows that the discussion is fully internal to the Phantom Principle Move world. If there were a real principle, any actual result would be a consequence requiring no assumption but only *deduction*.

Similar inadequacies are seen in the roughly contemporaneous:

(68) Chomsky (1986c: 17)

> "The earliest proposals appear in Chomsky (1964). A principle of recoverability of deletion states that an element can be deleted only if it is determined by a phrase that is structurally related to it or if it is a 'designated element,' where these notions have to be made precise."

Here two decades after the original talk of recoverability, the principle remains essentially a promissory note.

3.5 Recoverability in the 1990s

And the early 1990s saw no improvement:

(69)a. Chomsky (1991b: 429):

> "The complex V raises to the position [e] leaving a V-trace; we assume this to be substitution, not adjunction, on a natural interpretation of recoverability of deletion."

b. Chomsky (1991b: 441)

> "I have suggested that *there* is eliminated by LF substitution. But *there* has specific features, and we might suppose on these grounds that it is undeletable by the condition on recoverability of deletion--yet to be precisely formulated."

The principle name is still used in a totally dream like fashion, with admission that it has not been formulated seriously. Empty talk of 'natural interpretation' is no doubt supposed to make the lack of substance more palatable. [19] But it cannot make sense to talk about a 'natural interpretation' of a principle which does not actually exist in the requisite sense. Contentless rhetoric of this sort is one of the clear stigmata of NC's play acting at science. A skeptical reader might try to determine what is a 'natural' interpretation of the Principle of Magically Determined Deletion, whose intuitive idea is that (only appropriate) stuff deletes in all and only the appropriate places. This principle explains all the data for which NC has invoked recoverability, that is, explains it in the same let's pretend world where recoverability does.

The same sort of illegitimate procedure linked to the terminology 'recoverability of deletion' continues in the mid 1990s, where one finds proposals of equal or even greater vacuity then some of those of earlier ones:

(70) Chomksy and Lasnik (1995: 44)

"Substitution is constrained by a UG principle of *recoverability of deletion,* which requires that no information be lost by the operation; thus, α may substitute for β only if there is no feature conflict between them. The target of substitution will therefore always be an EC with the same categorial features as the moved category (the structure-preserving hypothesis of Emonds 1976)."

Note that vague talk of no information loss understood as lack of feature conflict has little or nothing to do with much of the supposed extension of the 1960s versions, since e.g. the deletion of you in imperatives could involve no such conflict. This reveals inter alia that the later development of invocations of recoverability cannot be viewed as just sloppy references to something better of earlier years.

A last invocation of the principle in the same work states:

(71) Chomsky and Lasnik (1995: 65)

"A strong form of recoverability of deletion would presumably prevent deletion of an element with ϕ-features."

If there was any remaining doubt about the dream character of invocation of the idea, (71) must eliminate it. Here one finds allusion to 'a strong form' of some putative principle. But since the latter has never been given, one can have no actual idea what strong and weak forms of it would be like. This renders appropriately ludicrous the following indication that this unknown variant of an ungiven principle would 'presumably' prevent the deletion of something.

3.6 NC on Recoverability: Summary

The bottom line about NC's talk of recoverability is thus clear:

(72)a. In the 1960s he formulated two partially explicit, albeit different principles associated with this name.

b. Since then, he has, as far as I am aware, never formulated a more adequate version or solved the problems involved therein.

c. Despite (72b), he has again and again and again invoked some supposed principle of recoverability as an element of universal grammar, claimed that it explains this or that, that it prevents this or guarantees that.

In short, from the mid 1960s on, NC's writings about recoverability have been a clear and repetitive instantiation of that strand of play acting at linguistics referred to as the Phantom Principle Move in Postal (1988, 2004, Chapter 9). That is, he has repeatedly used names like Principle of Recoverability of Deletion to suggest falsely that there was some single actual principle to which he was referring. But a search of post-1965 works not only fails to uncover any actual formulation but reveals what are in effect multiple admissions that no such formulation exists. All this forces the conclusion that invocation of the name was mere bluff of the sort which has no justifiable place in actual inquiry, but whose presence is no surprise in a program of play acting at science.

Consideration of what has been shown so far in this work reveals the existence of a sort of historical paradox concerning NC's ideas. On the one hand, there is, enormous social success over decades, on the other, a quality of proposal and degree of actual descriptive and theoretical adequacy and success which is hard to underestimate. The relevant historical paradox is nicely highlighted by a confrontation of the truly ludicrous quality of the thirty year plus long series of invocations of two principles I have documented, one a grotesquely false condition and one never actually formulated, with the following parody-like exaggerations of putative linguistic progress:

(73) Newmeyer (1991: 200)

> "A recent characterization of the history of generative syntax is one of steady progress throughout a process of accretion. This view points to a succession of discoveries, each building on prior ones, that have steered the field on a straight course that has led inexorably to the government-binding (GB) theory of the present day. <<To be specific, this account characterizes the principal task of the syntactician of thirty years ago to have been to construct grammars of individual languages, each consisting of a list of language-particular rules.>> Between that time and the present, our ever deepening

understanding of the principles of universal grammar (UG) has led to a steady reduction of the complexity and language-particularity of these rules. Today, our understanding of these principles is profound; in fact, we are close to the point where we can attribute virtually all observable differences among languages to the parameterization of these principles within highly circumscribed limits.

This interpretation is largely due to Chomsky and it receives its clearest exposition in his 1986 book *Knowledge of Language.* <<In a discussion spanning over one hundred pages, Chomsky reviews how progress in developing the principles that govern the general form of grammars has allowed, first simplification in the statement of individual rules, and then their literal elimination, to the point where now we have arrived at 'a conception of UG as a virtually rule-free system' (93).>>

   It is clear that Chomsky views progress toward this goal as having been achieved in a fairly gradual fashion. <<The results that he cites as having led to the current highly developed conception of UG seem fairly evenly distributed over the past quarter-century.>> From the 1960s, Chomsky cites the principle of recoverability of deletion and the A-over-A principle (Chomsky 1964), followed by Ross's (1967) 'island constraints."

That is, the putative profoundly understood principles representing the climax of theoretical evolution being glorified in (73) include the two wretched failures whose qualification as such I have just documented. Nothing could probably indicate better the *success* of NC's play acting at linguistics than the fact that these two items could be cited in a context like (73). There might be some doubt as to whether Newmeyer was *making* the judgments in (73) or merely *reporting* NC's advocacy of them. But if Newmeyer had any strong disagreement with the evaluation, still less if had realized its approximation to satire, he scrupuloulsy avoided revealing it. And it is difficult to imagine that he could have written anything like (73) citing the two principles had he realized that they were the intellectual travesties they have been shown to be.

3.7 Leading Others into Error

As in the case of the A-over-A Principle, NC's great influence rendered it likely, perhaps inevitable, that many others would be led to invoke the Principle of Recoverability of Deletion *as if it were a real thing*. And that is what happened.

So Akmajian and Heny (1975: 242, 248, 256) speak about recoverability without referencing any precise formulation. Exceptionally though, they do try to characterize what the notion means, saying something like what I did above: 'it must be possible to determine from the statement of the rule that has applied along with the output tree, what elements have been deleted.' Informal and incomplete as this is, it is better than almost anything else in the post 1965 literature.

Lasnik (1981: 153, 165, 166, 172) multiply invokes recoverability without stating any principle. The first of these pages vaguely refers to the account in Chomsky (1965). But it is not clear that that formulation would do what Lasnik wants, e.g. (page 165), preventing a rule Do-Support from applying.

Kayne (1984) talks about recoverability in various places, usually in the context of arguing that some consequence putatively due to that principle actually follows in his terms from something else. Nowhere is a precise principle cited.

Riemsdijk and Williams (1986: 98, 102f, 160f, 167f) multiply invoke recoverability but admit (page 103):
(74)
> "The principle for recoverability that would allow this deletion remains to be given, but it is plausible to assume that such a principle would distinguish free deletion from deletion under identity (or 'nondistinctness') and allow a greater range of deletion in the latter case."

Note that this 'remains to be given' admission dates from twenty two years after NC's original offering with the relevant name. And nothing would be different today; see below. [20]

Lasnik and Saito (1988: 113) talk about a general principle Recoverability of Deletion which blocks application of a general principle Affect α in certain cases. But no actual principle involving recoverability is stated or referenced.

Radford (1981: 266-268, 274-276, 296) discusses the notion extensively and even states a putative version:

(75) Radford (1981: 266)

> "Only elements which do not have semantic content can be deleted."

No precise way of determing whether the 'semantic content' claim holds or not is given. Radford interprets this extensionally in such a way that it supposedly blocks deletion of PPs because Ps have inherent meaning. He does not defend this idea against obvious facts like the equivalence of (76a, b), where there is no serious way to assign any meaning to the P in (76b), nonetheless no more deletable than any other.

(76)a. Two plus seven equals nine.

    b. Two plus seven is equal *(to) nine.

One notes further that (75) would preclude all deletions under identity of the sort explicitly intended to be allowed in NC's versions in 1964 and 1965, and also in Akmajian and Heny (1975). That is, ellipsis could not be characterized as deletion. What this illustrates again inter alia is the widespread tendency for a single name to be used in NC inspired linguistics for diverse and even incompatible claims, no doubt confusing many into the false belief that some single notion is serving widespread explanatory functions.

Larson (1988: 370--374) cites recoverability as a putative basis for constraints on a posited 'Dative Shift' rule:

(77) Larson (1988: 371)

> "In this situation suppression of *to* would result in an unrecoverable loss of thematic information associated with the preposition. Such suppression will thus be blocked by familiar principles excluding unrecoverable deletions."

But no such principles are stated or referenced, instantiating again the Phantom Principle Move. Despite this, Müller (1995: 190) claims to find Larson's (1988) account convincing, hardly an encouraging fact about the state of syntactic discussion.

Rizzi (1990: 53) claims that substitution for C^o is only possible if that consituent is radically empty, a result determined by the Recoverability Principle, no version of which is stated or referenced.

Cinque (1990: 159) talks about deletion of *wh* phrases being impossible in the absence of recoverability. No principle is stated and the only reference for such is to Chomsky and Lasnik (1977).

Lasnik and Saito (1992: 60, 65) invoke the notion. The former page says that the idea eliminates the need to stipulate that a general principle 'Delete anything anywhere' has to be constrained to things in COMP. They add:

(78)

> "In these examples, however recoverability is to be formlated, it will surely prohibit the deletion of any of the lexically realized categories."

Thus the absence of an actual formulation and the dream character of the proposal are made perfectly explicit: no actual principle of recoverability is stated or referenced.

Cowper (1992: 15, 82, 84, 104, 129-130) talks about a property of recoverability in a number of contexts, claims things follow from it, but admits

(79) Cowper (1992: 88)

> "RECOVERABILITY: Although this principle was not developed in detail, but merely mentioned, its effect on NP movement is clear."

By 'mentioned' here Cowper could only mean 'some putative principle *name* was mentioned', since no actual principle is either stated or referenced.

Ouhalla (1994: 77) offers a principle called Recoverability Condition, stated as:

(80)

> "The content of a null category must be recoverable (from a co-indexed overt category in the sentence)."

But (80) is nearly empty since 'recoverable' is not defined.

Collins (1997: 101-102) has several completely phantom invocations of recoverability to explain things. They are phantoms because no principle is stated and none referenced. The idea is that something called a D feature is interpretable and therefore not deletable.

Lasnik (2000: 108, 109, 173) mentions recoverablity three times. The former two citations seem to refer to the formulation in Chomsky (1965). But the latter page, giving an exegisis of some NC ideas of the early 1990s, says: 'According to Chomsky, we can't delete this trace because T is semantically important. If we delete T, we'll violate recoverability of deletion.' NC cited no actual principle, nor does Lasnik, nor does he indicate that this notion is distinct from that referenced on his pages 108, 109, since Chomsky's (1965) formulation, given in (57), said nothing about semantics, still less about anything being semantically important. Again one sees a dreamy invocation of a principle name as if it had a consistent or real denotation, when in fact none has been made available.

Hornstein (2001: 15) makes a completely empty invocation of recoverability, also without stating or referencing any actual principle:

(81)

> "There are other LF filters that plausibly have similar interpretations, e.g. the recoverability of deletion."

One sees then that the generative literature is very broadly characterized by the same sort of invocation of distinct principles with the same name and, worse, invocation of mere names, which are characteristic of NC's post-1965 references to a supposed Principle of Recoverability of Deletion. [21] Evidently, a wide spectrum of generative linguists influenced by NC have been writing as if there were a serious principle of Recoverability of Deletion which could be appealed to as an explanatory device with no need to actually specify such a thing in precise detail. Implicit, perhaps, is their (entirely groundless) assumption that NC has somewhere provided the necessary mechanism. The unfortunate consequence is that NC's play acting at linguistics, so palpable in his own works has, to a signficant extent, polluted the the broader generative movement of which he has always been the undisputed major influence.

Notes

*** I am indebted to Christina Behme, Shalom Lappin, Robert D. Levine and David Johnson, for very many valuable comments and suggestions which have significantly improved this work. Deficiencies of any kind are entirely the responsibility of the author.

1 NC's failure to state that the principle is just wrong is manifest as late as Chomsky (2005a: 7), which claims:

> (i)
>
> "A number of paths were pursued to try to resolve the tension. The most successful turned out to be efforts to formulate general principles, attributed to UG--that is, the genetic endowment--leaving a somewhat reduced residue of phenomena that would result, somehow, from experience. Early proposals were the A-over-A Principle, conditions on *wh-* extraction from *wh-*phrases (relatives and interrogatives), simplification of T-markers to base recursion (following observations by Charles Fillmore) and cyclicity…."

This rambling passage is written in such a way as to allow, if not require, the interpretation that the A-over-A Principle was among successful proposals and a member of a set which includes some version of the cyclicity principle, the latter something NC continues to strongly advocate.

2 This claim contradicts several assertions in the literature:

(i) Newmeyer (1986a: 146)

> "Apparent counterexamples like (6.12a-b) forced Chomsky to give up the A-over-A Principle very rapidly (Chomsky 1964b)."

The relevant examples were:

(ii)a. [NP who] would you approve of [NP my seeing __]

  b. [NP what] are you uncertain about [NP my giving ___ to John]

Newmeyer did not otherwise justify his claim.

(iii) Harris (1993: 122)

> "Unfortunately, the A-over-A principle was a bust. When Chomsky discovered that it made the wrong predictions in certain cases, he--quickly, quietly, and reluctantly-- dropped it."

Harris's basis for this remark consisted of the following statement by NC:

(iv) Chomsky (1964c: 74 n 16a)

> "Alternatively, one might attempt to account for this distinction by a condition that relies on the fact that in the illegitimate case the Noun Phrase to be preposed is continued [sic] within a Noun Phrase while in the legitimate case, it is not. However, the condition that a Noun Phrase contained within a Noun Phrase is not subject to (6), though quite plausible

and suggested by many examples as apparently somewhat too strong, as we can see from such, to be sure, rather marginal examples as 'who would you approve of my seeing?,' 'what are you uncertain about giving to John?', 'what would you be surprised by his reading?,' etc."

Even (iv) makes clear that that the last part of (iii) is not the case, a conclusion supported by all that follows. NC's choice of words indicates rather an attempt to hold on to the principle, which is only 'somewhat' too strong. Moreover, NC's approach to the counterexamples he cited is in part to declare them 'rather marginal'. This typical NC move of seeking to rationalize ignoring facts when they threaten principles *of his* was perhaps justified in this case for the last two examples, but certainly not for the first, which for me is perfect.

3 Page 85 of this work reveals truly incredible sloppiness, especially when one recalls that it is a reprinting. That page utlizes three separate terms for the same idea; A-over-A Condition, A-over-A Principle and A-over-A Constraint. The next page uses two different names: A-over-A Principle and A-over-A Condition. Inter alia, such small points indicate the extraordinary extent to which NC's writings have, arguably, quite generally evaded refereeing or even *reasonable editin*g.

4 An excellent and possibly the first dissection of this move on NC's part is found in Pullum (1985). After listing four distinct invocations of the 'some version' move with respect to so-called X-bar theory, Pullum (1985: 323) remarked: 'The assertions in (i) are phrased as if they state empirical assumptions, but it is striking that the works from which they are taken do not proceed to give any hint as to which version of the alleged X-bar theory they assume, or what its general claims might be, even in outline.' A key moral is that the properties of NC's discourse which I analyze in this work with respect to the A-over-A Principle and Recoverability, are in no sense limited to the domains focused on here.

5 Chomsky (1968: 45) contains a tortured proposal in which cases like (23a, b) were supposedly allowed *despite* the A over-A Principle because of some condition which assigns 'transparency' to noun phrases which are propositions lacking the internal structure of noun phrases. Such an account would inter alia of course wrongly fail to block (i), entirely as bad (and in the same way) as (21):

 (i) *I wonder what John's drinking annoyed Louise.

But, far more fundamentally, recognizing a feature 'transparency' whose assignment to constituents allows them *not* to be constrained by the A-over-A Principle in effect reduces the content of that principle to null unless there are some universal constraints on 'transparency' assignment. But such constraints have never been given or even mentioned. It is worth observing that Baez (1998) gives (ii) as one of the more high valued principles for rating the degree to which a putative contributor (to physics) is *a crackpot*.

 (ii) 50 points for claiming you have a revolutionary theory but giving no concrete testable predictions.

6 The claim involving the date 1960 is an extraordinary falsehood. One must take it to be either indicative of NC's propensity to gravely distort the history of his own ideas, as already documented in Postal and Pullum (1997), or to reveal his contempt of the need to read and edit his own prose and that attributed to him in interviews.

7 Talk of 'putting aside' counterexamples and similar protective discourse designed to ward off the possibility of disconfirmation is, of course, an archetypical feature of the NC style, as in (28).

8 Given this 1981 discussion, one would expect that the principle would be discussed in Radford's follow up 1988 volume. But although there is a long list of putative constraints found there (1988: 538ff), the A-over-A Principle is unmentioned and not listed in the index. Thus a principle was invoked as a serious explanatory device by an author in 1981 and yet was not even mentioned by the same author in a revision of that textbook seven years later. If evidence or arguments against the principle had surfaced in the interim, they would evidently have merited mention and/or referencing. My conclusion is that what one had in 1981 was simply invocation by an NC enthusiast of one of NC's pet ideas; when, by 1988, it became clear, that this idea was no longer a point of focus of current NC influenced activity, Radford simply dropped it so as not to seem out of step. Genuine evidence or argument was irrelevant, as it had in fact been all along since at least the point when Ross (1967 [1986]) had documented the F-principle status of the A-over-A Principle but NC had decided to ignore that unpleasant (for him) truth.

9 Observe too that Postal (1974) indicated that certain *infinitival* parallels to cases like Lasnik and Saito's (ii) are *grammatical*, including (i), discovered by Edward Witten:

 (i) Postal (1974: 92, note 8)

   I have wanted [to know __] *for many years* [exactly what happened to Rosa Luxemburg].

As far as I can see, Lasnik and Saito's proposal fails to properly distinguish (i), in which the complement object occurs to the right of the highlighted main clause adverbial, from their (ii).

10 It has more than once been suggested that NC's activities in linguistics have created a cult of personality, as in Raymond Oenbring's remark: "Indeed I would like to make it clear that the goal of my dissertation is not to continue to stoke the flames of Chomsky's pan-academic cult of personality." at: http://www.cobses.info/Oenbring/dissertation.html

While he would unquestionably find this view both wrong and offensive (see his remark, 1999: 211: "The cult of personality is entirely alien to him [NC]/", Smith (1999, 2005) are unintentionally an extensive documentation of its correctness.

11 As Ross (1967 [1986]) made clear, so-called across-the-board (ATB) extraction of one element from every conjunct needs to be excluded from the scope of the constraint, given cases like

  (i) [$_\alpha$ How long] did Mary learn [$_\beta$that the Queen Mary was] and Jack say the [$_\beta$the Titanic might have been]?

Of course, cases like (i) raise more general issues than consistency with a formulation of the CSC, since it is e.g. unclear in tranformational terms how to relate the single fronted element in such cases to what appear to be multiple gaps; see Chapter 6.

12 Lakoff (1986) is an exception. See Postal (1998) for criticism of Lakoff's claims and Levine (2002) for critical commentary on that criticism.

13 The last general remark about coordination in NC's work that I are aware of occurs in note 7 of page 224 of Chomksy (1965):

  (i)

   "We are discussing only embedding transformations here, but should extend the discussion to various generalized transformations that   form   coordinate   constructions (e.g., conjunction). There are certain problems concerning these, but I believe that they can be incorporated quite readily in the present scheme by permitting rule schemata (in the sense of Chomsky and Miller, 1963, P- 298; Chomsky and Schützenberger, 1963, P 133) introducing coordinated elements that are then modified, rearranged, and appropriately interrelated by singulary transformations. If the suggestion of note 9, Chapter 2, is workable, then such rule schemata need not be stated in the grammar at all. Rather, by a general convention we can associate such a schema with each major

category.   This approach to coordination relies heavily on the filtering effect of transformations, discussed later. Thus wherever we have coordination, some category is coordinated *n* times in the matrix sentence, and *n* occurrences of matched sentences are independently generated by the base rules."

Evidently, these remarks were entirely programmatic and implicitly promissory. To the best of my knowledge, moreover, the promise is unfulfilled and in the succeeding four decades, NC has himself published nothing which advances the program even an iota.

The absence of any substance in NC's work dealing with coordination together with his followers' and defenders' failures to come to grips with that lack is usefully represented in a negative way in the overall highly laudatory remarks about NC's work in:

(i) Anderson, Chung, McCloskey and Newmeyer (1996: 72-73):

"So it should come as no surprise that current generative syntax has experienced some losses at the descriptive end. Various constructions that once figured prominently in theoretical debate, including *wh*-clefts, comparatives, gapping and other ellipsis processes, are today largely ignored (and unaccounted for) because the descriptive mechanisms they appear to require fall outside the reach of the principles recognized by the current theory."

The strained justificatory remark in (i) cites the rather peripheral *gapping* construction, which is limited to a relatively tiny proper subset of coordination structures, but ignores the overall characterization of coordination, arguably one of the handfull of most characteristic and defining syntactic aspects of NLs. More generally, of course, there is no basis for not translating the quote into something less defensive of NC's influence, as in (ii):

 (ii) Current generative syntax has experienced a vast narowing of descriptive interest, rendering it in effect a putative account of only an artifactually delimited subpart of the constructions of those NLs treated. Various constuctions that once figured prominently in theoretical debate, most notably coordination, are today largely ignored and, worse, (as in (i)) it is not made explicit that they are ignored or what the consequences of that artifice are. The reason for this retreat from factual reality appears to be no more than a cultish, unargued and dogmatic adoption of various assumptions of NC's, whose ideas fail to allow for a treatment of the descriptive domains which have simply been ignored.

An argument for the greater accuracy of the translation in (ii) is that in other frameworks of the period not committed to NC's ideas such as GPSG, HPSG and Categorial Grammar, the facts of coordination figure quite prominently. See in particular Gazdar (1981, 1982), Gazdar, Pullum, Sag and Wasow (1982), Gazdar, Klein, Pullum and Sag (1985), Pollard and Sag (1987, 1994), Steedman (1996).

The joint effects of NC's dominant influence and multidecade long ignoring of coordination is clearly seen in Baltin and Collins (2001). This more than 760 page survey of largely Chomskyan syntactic ideas of the moment not only contains no article on coordination, its index does not even contain an entry for *coordination* or *conjunction*. On the contrary, Huddleston and Pullum (2002), a work largely *free* of Chomskyan influence, has a ninety page chapter on coordination and its index contains dozens of entries under the heading *coordination*.

14 Just for comparison, the Specified Subject Condition is listed in this index eleven times and the Avoid Pronoun Principle fifteen times.

15 Given this record, it does not seem surprising that largely laudatory and derivative volumes about NC and/or his ideas such as Hornstein and Lightfoot (1981), Kayne (1984), Burzio (1986), Baker (1988), Lasnik and Uriagereka (1988), Cinque (1990), Rizzi (1990), Haegeman (1991), Cowper (1992), Lasnik and Saito (1992), Manzini (1992), Haley and Lunsford (1994), Kayne (1994), Ouhalla (1994), Müller (1995), Baker (1996), Newmeyer (1996), Stroik (1996), Kitahara (1997), Collins (1997), Radford (1997a, b), Torrego (1998), Epstein and Hornstein (1999), Lasnik (1999), Smith (1999), Lasnik (2000), Pesetsky (2000), Hornstein (2001), Epstein and Seely (2002) and Poole (2002) also fail to mention the CSC. To this tradition, Riemsdijk and Williams (1986), Napoli (1993) and Roberts (1997) are honorable and noteworthy exceptions. The latter contains a detailed discussion and concludes (p.188): 'The CSC has to a large extent resisted satisfactory theoretical treatment in the principles-and-parameters framework.' Similarly, Fox (2000) contains extensive discussion of the CSC.

16 Curiously, one claim in the literature to the effect that NC cited the CSC is incorrect. McCawley (1982: 74), in a critical review of Chomsky (1972b), claimed that somewhere in pages 130-136, NC had dealt with the examples in (i) and had taken both to involve a violation of the CSC.

(i)a. *Irv and someone were dancing together, but I don't know who Irv and were dancing together.

b. ?Irv and someone were dancing together, but I don't know who.

But the cited pages in Chomsky (1972b) do not contain these examples nor any *explicit* invocation of the CSC and as far as I can tell, neither does any other page of that work. The CSC is uncited in its index.

17 That something like this notion of recoverability was intended is supported by the related discussion in Katz and Postal (1964: 79):

(i)

> "Before considering such a treatment of questions, it is necessary to discuss an important principle governing the operation of deletion and substitution transformations. This principle requires that the distortions produced by the transformational removal of elements from a P-marker be unique. That is, a transformation T which operates by deleting elements or substituting for elements can apply to a P-marker only if the output of T on that P-marker permits unique recovery of that P-marker, given a description of T."

To supposedly guarantee this property, Katz and Postal (1964: 81) proposed:

> "(ii) A transformation T whose elementary transformations include a deletion or substitution affecting the ith term of T1 s structure index applies to a P-marker PM bracketed in terms of the structure index of T just in case one of the following conditions is met:
>
>   (i)   The ith term of the structure index of T is a string of terminal symbols.
>   (ii) The string of terminal symbols of the ith term of the bracketing of PM is neciessarily identical with a different string of terminal symbols also occurring in PM. 14
>   (iii) The string of terminal symbols of the ith term of the bracketing of PM is dominated by Pro."

This proposal is obviously related to the earlier one in Chomsky (1964a) and even more so to that in Chomsky (1965) discussed just below.

18 That Chomsky and Lasnik's (1977) implication that there was a genuine recoverability principle was pretense was noted fairly delicately in Pullum and Postal (1979: 692). Chomsky and Lasnik (1977: 446) had posited a general deletion rule of the form:

(i)

"In the domain COMP, delete $[_\alpha \varphi]$, where α is an arbitrary category and φ an arbitrary structure."

The problem is that (i) would countenance the deletion of in fact undeletable elements, like the instances of <u>who</u> in:

(ii)a. I wonder who called.

b. Who called?

It was precisely to remedy this unacceptable result that Chomsky and Lasnik appealed to recoverability. To this, Pullum and Postal (1979: 692) objected:

(iii)

"This is a serious problem for CL, given (2) and their other assumptions. Unfortunately, they do not deal with it directly. Instead, they appeal to an unstated principle of recoverability of deletion. Their pretheoretical idea is that some principle of universal grammar blocks deletion of 'unrecoverable' elements and that items with 'semantic content' are 'unrecoverable'. Hence, by assuming that question clause *wh*-forms but not restrictive relative clause *wh*-forms have 'semantic content', they can account for the deletability of the latter and undeletability of the former. Even if all this makes a reasonable program, it remains nothing but that. The concepts appealed to, 'recoverable', 'semantic content', 'a kind of quantifier', etc., remain obscure and undefined. Thus, even if one were to grant, which we do not (cf. immediately below), that the relevant deletable and undeletable forms in COMPs can be argued to differ appropriately in 'semantic content', the claim that something thereby blocks their deletion remains an unpaid promissory note."

19 Postal (2004, Chapter 12) provides a detailed discussion of such empty uses of 'natural' in linguistics and in NC's writings in particular.

20 Such a procedure was satirized in Postal (1988), reprinted in Postal (2004, Chapter 9) with a bit of historical updating.

21 Williams (1981: 36) supports one of the claims in the text, while going against the trend represented by the other. That is, he presents a principle called Recoverability of Deletions, which is quite distinct from other claims in the literature with related names. It says:

(i)

"If T is a term moved or deleted by a transformation, and T consists of simultaneous factors $F_1 \dots F_n$, then it must be the case that $F_1 = \dots, = F_n$."

This formulation is idiosyncratically linked to Williams' ideas about coordination and has little to do with other principles in the literature with such a name. At the same time, actually stating a principle to go with the name, as Williams did, was, as has been seen, already exceptional.

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