(8) ... mer d'chind em Hans es huus haend
... we the children-ACC Hans-DAT the house-ACC have
wele laa hälfe aastriiche
wanted let help paint
'... we have wanted to let the children help Hans paint the house.'

3. A NON-CONTEXT-FREENESS ARGUMENT

An argument for the weak non-context-freeness of Swiss German can be built from the foregoing data. On that basis we make the following minimal set of claims about the string set of Swiss German. Note that these claims are weaker than the analysis presented in the previous section.

Claim 1: Swiss-German subordinate clauses can have a structure in which all the Vs follow all the NPs.

In particular, some sentences of the following schema are grammatical: *Jan säit das mer NP* es huus haend wele V* aastriiche* where the NPs are either *d'chind* or *em Hans* and the Vs are either *laa* or *hälfe*. See sentences (7) and (8) for instances supporting this claim.

Claim 2: Among such sentences, those with all dative NPs preceding all accusative NPs, and all dative-subcategorizing Vs preceding all accusative-subcategorizing Vs are acceptable.

In particular, some sentences of the following schema are grammatical *Jan säit das mer (d'chind)* (em Hans)* es huus haend wele laa* hälfe* aastriiche*. Again, see sentences (7) and (8) for instances supporting this claim.

Claim 3: The number of Vs requiring dative objects (e.g., *hälfe*) must equal the number of dative NPs (e.g., *em Hans*) and similarly for accusatives (*laa* and *d'chind*); note that this holds even if all the Vs follow all the NPs.[4]

See sentences (6), and (12) through (22) for instances supporting this claim.

Claim 4: An arbitrary number of Vs can occur in a subordinate clause of this type (subject, of course, to performance constraints).

Now, given any language L that satisfies these claims, we can take its image under the homomorphism f, where

$$
\begin{aligned}
f(\text{“d'chind”}) &= a \\
f(\text{“em Hans”}) &= b \\
f(\text{“laa”}) &= c \\
f(\text{“hälfe”}) &= d \\
f(\text{“Jan säit das mer”}) &= w \\
f(\text{“es huus haend wele”}) &= x \\
f(\text{“aastriiche”}) &= y \\
f(s) &= z \text{ otherwise,}
\end{aligned}
$$

and then intersect the language $f(L)$ with the regular language $r = wa^*b^*xc^*d^*y$. According to the claims above, $f(L) \cap r = wa^mb^nxc^md^ny$, which is weakly non-context-free.[5] But since context-free languages are closed under homomorphisms and under intersection with regular languages (Hopcroft and Ullman, 1979, pp. 130–135), the original language L, whatever it is, must also be weakly non-context-free. Now since our claims hold for Swiss German, the argument holds as well, and Swiss German is thus shown to be weakly non-context-free.[6]

As a trivial corollary, Swiss German is not strongly context-free either, regardless of one's view as to the appropriate structures for the language. Thus, we have an argument for the strong non-context-freeness of natural language that is not subject to the same frailty as the Dutch argument, i.e., its reliance on a linguistic motivation for its analysis of Dutch clause structure. Unlike the Dutch argument, ours does not mention, let alone hinge on, the constituent structure of the sentences in question or their semantics.

4. Possible counterarguments

The premises of the argument are quite explicit, namely the four claims presented above; counterarguments could be directed against any of them. We discuss several possibilities.

4.1. “*The Data Are Wrong*”

An argument can always be made that the grammaticality judgments expressed by our sample sentences are just wrong – that is, that the informants were mistaken about their own judgments or the transcriber simply misconstrued those judgments. This situation is, of course, hardly unique to this research, but pervades the linguistic method in general; it is especially problematic in the light of psychological research such as that of