for CLARKS FRENCH PAPER:

SUMMARY OF TRASFORMATIONAL PRIMITIVES

I. KERNELS

1. N Predicate.

1.1 N is N_{cl}. all other N is N (e.g. He is a problem) are derived.

1.2 N V_{op} N_{prop}. (N_{prop}: names of properties, but not derived from A or V, like life ← live). e.g. A gem has value, A book has price, A stone has color. Then A stone is colored is N is Na derived from this. But A gem is valuable is transformationally uncertain: is it a separate N is A, or A book is precious is N is A (neither are regularly derivable from has value, has price ?) ? A man has height is presumably derived from A man is high. And A book has "cost (of \$5) is " " " A book costs \$5 ~~shilling~~. Perhaps number is in N_{prop}: Man has a number. ∄ Air has a number.

1.3 N is A (A without suffix, usually.) Some AN ← N_2 is PN_1 or the like, e.g. adrenal cortex.

1.4 N V_{op} $\mathring{P}$ N_{scale}. Here the V_{op} means to mount the following scale: to age a year, to extend a meter, to cost a dollar. We say that there is an always zeroed P because the Ω transforms like a D. There is a special morphophonemics on V_{op}: He ages a year → He is a year [in] of age → He is a year old; It extends a meter in height → It is a meter in height (or: high). The fact that the V_{op} means 'to mount' explains why the $V_{op}d$ (old, high) is the high end of the scale (∄ He is a year young.).

[margin note: ERE $V_{ap} \to V_{ap}d$ LIKE: He talks slowly → He is slow in talking]

1.5 N V_0. e.g. N exists. One V_0 (in English: occur ?) is V_{0ap} and hence zeroable in nominalization for those N that can be its subject (e.g. Storm occurs → The occurrence of the storm ... → The storm ..., but ∄ House occurs.)

1.5a In some languages (French) certain V_0 have prefixed reflexive se.

1.6 N V_d D e.g. N feels well, N behaves badly. (feels perhaps ← is, and the primitive V_d may have few D selected by each V_d.)

2. NRN: relation between two N.

2.1. N is N_{rel} PN. e.g. father of. (N_{rel}: names of relation)

2.2. N is A_{rel} PN. e.g. close to, same as, different from, other than.
For certain A_{rel} (equal to, more than) the N is number, quantity
Comparitive sentences are derived from such K (size equals size

2.3. N is PN.

2.4. N V_n N. including those of possession ($\neq V_{op}$: those of 1.2): N has a book
Some nominalized V_n of N_2 ← N_1 V_{ν} V_n of N_2 ($\neq N_1 V_n N_2$)
e.g. French ablation de N_2. (V_{ν} = what is called U.)

2.5 N $V_{n\,coll}$ PN.

2.6 N V (P)N_2P N where N_2P or PN_2P are like a single P (and N_2 is not an object selected by V).

Note: In 1.5 there are certain $V_{o\,coll}$ which require a collective N_{coll} (or ~~N~~ plural N, or NCNCN: at least 3 N!) as subject: dust collects, bugs gathe
In 2.4 there are certain $V_{n\,coll}$ which require N_{coll} or plural N or NCN (at least 2 N!) as object: It divides into pieces, It broke into dust

Certain V_n are relational in meaning (e.g. equals) and can appear as in A_{rel} P or in N_{rel} P (which of the 3 is primitive?); here fit the = and > of mathematics. Other V_n are "real verbs", e.g. eat.

3. N R (N, N) : relation between N and a pair of N (not simply relation ~~between~~ among 3 N).

3.1. N₁ V npn N₂ P_i N₃. This may ← N₁ V N₂ C N₂ V_i N₃ (He gave a book to John ← He gave a book as John has a book?) or ← from other NVN kernels. However, the second kernel would not be independent of the first. Here fit a = b + c, etc., of mathematics; while a + b = c + d ← a + b = X which is same X as in X = c + d. Z is 5% of W ← 100 × Z = X = 5 × W. (X there as above)

3.2 N V P N P N. e.g. A extends from B to C. In A dune longtemps the longtemps is pro-word for from B to C.

3.3 N is between N and N. Are there other relation-words of this type?

3.4 N V N D ?

It is not clear what other K types exist in particular language. Here in N is presumably derivable from ordinary K.

The unspecified CK which are used as source for the and zeroings are not new K types. They are of the above types, but unknown.

II. ϕ_a

1. the is a necessary primitive adjunct on certain N except when some other ϕ is operating on them; that is, these N do not occur without some ϕ: e.g. la Vésuve, but Il n'y a qu'un Vésuve; the US but US vintage, anti-US.

Other occurrences of the, this (le, ce) ← CK of certain kinds. e.g. we could say: the N_i ← word m in sentence n (which is N_i) refers to an individual which is same as individual to which word p (which is N_i?) in sentence n-q refers. This source, though peculiar, is conjoined from accepted K types (numbered from I above): 1.1 word is N_i
2.2 word is same as word
2.5 word occurs in position m...
2.5 word refers to individual
2.2 individual is same as individual

Other the NV ← N is only one which V, or the like;
the county doctor ← county doctors, viewed as a type (or not); etc.
In analyzing sentences, one does not have to specify the source of the, since it is not clear what CK to choose; one can write simply the ← CK.

2. plural is primitive adjunct for certain N which don't occur in singular (or not unless they are adjectivized, i.e. operated on by another ϕ).
other plural N ← NCN (or rather ← NCN...CN).
CN is primitive adjunct after singular N object of $V_{o\,coll}$: egg separates into yolk and albumen
CNCN ... " " " " " subject of V_{coll}: A and B and C gathered the
other CN ← CK, even CN of reciprocal verbs (A and B met).
If CN seems needed not for grammar but for truth, then it ← PN: sugar and water makes syrup ← N maker syrup from (mixing) sugar with water.

3. affixes: Some represent no transformational operation on the words to which they are affixed; hence they make independent new words.
Some are ϕ: A is anti-B ← A opposes B. (Here French -âtre.)
(One has to formulate the source sentence without the affix.)
Some are ← D, e.g. negative affixes ← not, which is D_s.

4. Q on N : e.g. some. But a A quantity of N could be analyzed not as Q N, but as ← N have quantity (K type 1.2), quantity in A.

5. D_{PN}: some D (especially D_s) are whole sat expressions (esp. PN), e.g. to all intents and purposes.
D_g (of degree) primitive on V, A, P, C, (not same D_g on all): not ← Φ_s:
French : font, tout, presque ; encore the English barely, hardly are D_g on A (not on N): barely 20 men came, barely a man came, ≠ barely man came, ≠ barely water spilled (hence barely in D_g on a).
D_s also not ← Φ_s, but on S rather than on V ; D_s is movable and can be used comfortably on pro-S: perhaps (Perhaps John came. It perhaps happened.) but quite in D_g on V (≠ Quite John forgot. ?≠ It quite happened. ≡ John quite forgot.)

The other D can be derived ← Φ_s : S D_i ← Sm is A_i, Sm is PN_i ; or ← CK.
Chief types of these are :

D_{man} ← is A_{man} ; $D_{i,man}$ = P A_i manner.

D_t : of time.
D_{loc}, $(PN)_{loc}$: of place.
D_q of quantity : He forgot completely ← His forgetting was complete.

D_{resp} (= in respect to...), often movable, especially to beginning of S: chez N ; physiologically ← in (respect to) physiology.

examples of D ← CK :
only, also, even (même) : Even John went ← John went and others (not John) went.
I did it myself : I did it without others doing it.

some D are Φ_m (morphophonemic change of form) from other D :
Ils l'entraînent avec eux ← Ils l'entraînent automatiquement (D_{man}) ?

Of course, D has a different effect if it is on K or on another D_i in the lattice.

III. ϕ_v

ϕ_v brings into its operand sentence a verb V_v (whose object is a verb), sometimes written U, leaving the subject Σ unchanged. * means that the V_v operates only on some V (e.g. those having the required suffix).

1. Types (according to form of V_v and change made in operand V):

1.1 temps composés: has gone, etc. (but past is ϕ_a?)

1.2 * is $V_{a}P$: is receptive to Ω.
* is $V_{en}P$: is creator of Ω.

1.3 * V_{-ap} V_{AL}: pousse un cri, assumes function. (← He functions)

1.4 * is A_v $PV_{en}P$: is full of desire for

1.5 V_v V_{ING}: tried walking.

1.6 V_v V_{INF}: tried to go. doit parler, va parler; essaye de parler, vient de parler; se décide à parler; s'organise pour parler.

1.7 be-replacers: is → appears, seems, becomes, shows itself (se revele) (or any to V)
We could say that there are V_v on to be, with to be zeroed (but to be ... ing is not zeroed: ≠ He seems walking and no zeroing before N after appears, seem: ≠ It seems a home)
However ≠ He shows himself to come early, so shows himself is not just V_v before to V, but restricted to to be.

1.8 is Ven → is Vable. This looks like a unary ϕ on Ven passive. But since able adds meaning (which unaries do not) while preserving the Σ and Ω of the passive, we list it here. Presumably it is unary (ϕ_{un}) on V_v (able) on Passive: It is able to be broken.

2. Special types. In some cases a V is added without new Σ, but the form is not the same as in 1 above.

2.1 ΣVΩ → (Σ's) V_{vn}(P) Ω V_{vr} Σ : I do it → (My) doing it tires me. We could say that this ← I tire (or: get tired) from (my) doing it.

2.2 CONTRA-V_v, whose Σ is the Ω (not the Σ) of the operand sentence:
He deserves promotion ← He deserves that people should promote him.
He suffered defeat ← He underwent that people defeated him.
In many cases the passive of the operand makes this into a V_{vr}, more comfortable:
He deserves being promoted ← He deserves that he should be promoted.
(this is ϕ_v, not ϕ_s: ≠ He deserves that she should be promoted)
Some V are both V_{vr} and contra-V_v, or ϕ_s and contra-V_v: He requires promotion (contra-V_v); He requires that they should promote her (ϕ_s). This is original ϕ_s, with a zeroing that gives the effect of contra-V_v.

3. Unaries on V_{vr}. (These will be arranged under Unaries)

3.1 Σ is A → Σ has (Σ's) An. (also * Σ is Vsn →)
3.2 * Σ V → Σ has Vsn. (has duration (FUNCTION)). More comfortable: V D → has A Vsn.
3.3 * Σ V → Σ is of Vsn. (is of duration). Or: has Vsn → is of Vsn.
3.4 * V_{op} D → is A (went hard → est hardif): part of a general unary (see later).
3.5 V_{op} → is(P): for convenience of zeroing under with.

4. The main properties distinguishing sub-types of V_{vr} are:
form of V_{vr}
change made in (following) V of operand sentence
restrictions on V (if any) " " " ~~of~~
" " Σ (must it be human?)
repeatability of Σ (as Σ's)
appearance of a ϕ_s-like form (as in deserves, where it is nevertheless an original ϕ_v, not ϕ_s, because the Σ must be the same).
types of unary that can operate on the ϕ_v.

IV. ϕ_S

ϕ_S brings to its operand sentence an addition such that the whole operand sentence is the Σ or Ω of the addition. (Whereas in ϕ_V both Σ and Ω of the addition come from the operand sentence.)

The distinguishing considerations for classifying sub-types are:

1. FORM of the addition $(\Sigma V_S,\ V_S\Omega;\ V_{SS})$ (V_S is also written W).
1.1. ΣV_S. Special: $\Sigma_{imp} V_S$ (e.g. il faut) as though $\leftarrow V_S\Omega$ (but $\neq$): e.g. It seems
1.2. $V_S\Omega$. including in A_S, in N_Σ.
1.3. V_{SS} ($\leftarrow C$, but sometimes $\neq C$): cause, ~~suffice for~~; entraîne. also: is (to V to V)
+ ΣV_S: N distinguishes Sn from Sn.
+ $\Sigma_{imp} V_S$: Il faut que S pour que S.

It ~~may~~ be best to classify ϕ_S by 1 above, and under each to classify by 2, and under each such subdivision to classify by 3 (deformation) + then other properties.
Better: classify by Operand, thereunder by deformation, thereunder by operator form (1) + then properties.

2. OPERAND (Of what does it consist?)
2.1 one S: I know that he came; I order that he should come. — $\phi_S(S)$
2.2 one S with special reference to its Σ: — $\phi_S(S,\Sigma)$
I order him to come ↔ I order him that he should come
They endowed him with ($\frac{\text{HLS}}{\text{A}}$) doctorate.
They deprived him of (his) life. (≠ They deprived of his life)
That cost (him) his life.
on N in N_2: They changed N into N. They made $N_1 N_2$. They made N_2 of N_1.
on N in A: They made N A.

Some of these are 2.1?

2.3 one S with special reference to its Ω: — $\phi_S(S,\Omega)$
DEFEND
I protect him from attack (← from people attacking him; but it is not KCK because ≠ I protect him from people attacking her)
(I protect him from being attacked in $\phi_S(S,\Sigma)$.)
(But La loi de 18 juillet vous défend d'afficher... in $\phi_S(S,\Sigma)$.)

2.4 two S — $\phi_S(S,S)$

Are $\phi_S(S,\Sigma)$ and $\phi_S(S,\Omega)$ found only in 1.1? If so, they can be considered sub-types of 1.1

3. DEFORMATIONS of the operand sentence (certain unaries among them)

3.1 that (que)

3.2 whether (si)

3.3 ~~to~~ (French: INF; + de, + à, + pour, etc.). Il faut pouvoir ← Il faut qu'on puisse

3.4 NOTHING: He goes → They make him go.

3.5 PERMUTATION: He sent → They sent him. He lost his shame → Shame lost him his shame
(This was called previously ZERO CAUSATIVE. In some cases the "causative" may be original and the other a MIDDLE form: Il rapproche N_1 de N_2 ↔ N_1 se rapproche de N_2)

3.6 under that/que there is choice of SUBJUNCTIVE (English: droppable should)

3.7 Conditional can be derived by zeroing from I WISH/WOULD that S(COND.).

3.8 When the operand is (S,Σ) or (S,Ω) there are various ways in which the Σ or Ω can be dropped, and various deformations of S.

3.9 also $\Sigma V \Omega$ → POUR PARMI Σ, $V^{INF}_{Vn}(P)\Omega$ under certain Φ_S; also chez Σ ?

3.10 various kinds of S_{Vn}, especially in English:
N's Ving N under $is\ A_t$, occurs D_t, is $A_{loc}(PN_{Sc})$, is D_t :
N's Ving of N " $is\ A_{man}$
N's V_{vn} of N
These are particularly important because they go with different $is\ A_S$.

3.11 When the operand sentence is N_1 is N_2, N is A, there are special deformations of the S_{Vn} (3.10) type: N_2's of N_1 (boyhood of Renoir), A_{vn} of N.

4. Properties

Certain important types of Φ_S have any human subject: $N_{hum}\ V_S$.

Certain deformations → (unaries) into other deformations, or into forms that look like Φ_{Vn} (by loss of Σ), or into other forms.

Certain $\Phi_S(S,\Sigma)$ and $\Phi_S(S,\Omega)$ can transform to look like CK (but we never get two independent K out of it): I endow him with his destrate (≠ I endow him with the destrate).
These are problems and special forms: I drink my coffee black ↔ I drink my coffee (coffee is black). ~~This is C (not Φ_S), but dependent K?~~

I. ϕ_c

1. Coordinate

1.1 and, or: or requires a difference between sentences. In certain situations also , and , , or .
" " " " $\frac{1}{2}$, $\frac{1}{3}$.

{zero parallel same words. NCN → N pl; Σ_{pe} V → Σ_{pe} V pl. not and not → neither nor (ne...ni, ni...ni in French)}

1.2 S_1 and S_2 and S_2 is not expected → S_1 but S_2: S_2 has 2 differences (a 1 + opposition) to S_1

1.3 S_1 and S_2 and N_i in S_2 refers to same individual as N_i in S_1 → S_1 wh- (THAT) S_2.
Unclear whether $A_2 A_1 N$ (which = N which is A_1 which is A_2) ← $A_1 N$ which is A_2 or whether which is A_1 and which is A_2 operate independently on N.

wh- ΣV → ΣV; wh- is X → X (permute to left, usually if A), also → (X).
the thing which, anything which → what; what is [ce qui est] zeroable ("nilpotent").

1.4 Comparative: {numbers / amount} {exceeds / equals} {numbers / amount}, with wh to other S. Special zeroings.
This is the source of the parallel comparatives: er than, less than, as as.
superlative: largest of N_1 ← larger than other N_1.
too large for N to V ← so large that N not V; large enough for N to V ← so large that N V.
(perhaps: (It is) so large that I can see it ← amount of its size equals amount needed for my seeing it.)

1.5 Hidden (dependent) CK (replaced by D or special words):
He doesn't read but English ← He reads English and he doesn't read non-English.
Only I came ← I came and non-I (others than I) did not come.
All the people except me came ← I did not come and all others came.

Note to 1.4: too A and A enough can be derived from 1.4 with C (require, etc.)
N_1 ~~[illegible]~~ equals N_2; $S_1(N_1)$; S_3 requires / permits $S_1(N_2)$ → S_1(N_1 enough) for S_3
N_1 exceeds N_2; $S_1(N_1)$; " " " → S_1(too N_1) for S_3

2. Subordinate: Zeroings and permutations of S_2 differ from Coordinate.
Special pronounings in S_2.
Subjunctive in S_2:
Infinitive in S_2: avant que N V → avant de V_{inf}.
Some C are affixes on V of S_2: Hurrying, I arrived. (French -ant)
SCS → $SP_c Sn$.
Sn is CS.
Sn is P_c Sn.
Sn V_{ss} Sn.

Since there are various properties which are special to particular Subordinate C, perhaps there is no general arrangement or classification that can be proposed as yet.

In principle, we expect the two S around C to be independent of each other, even though zeroings occur in S_2 only if S_2 has words identical with those of S_1. And S_2 may be reduced to D or the like (as in 1.5 above) only if it is closely related to S_1 (e.g. by being a negation of S_1).

Thus in I drink my coffee black we note that the C-like form (I drink my coffee with THE coffee being black, or the like) has a dependent S_2; not only that independent S_2 don't get zeroed, but they don't occur: ∄ I drink my coffee with THE tea being black — not for the same meaning of WITH = {IN THE STATE THAT / GIVEN THAT}. Hence we prefer to see this as original ϕ_S. But then we hesitate because in ϕ_S we expect that the operator V should be of a restricted type (know, like, find, etc.). However, then we notice that drink here is in V_{op} to coffee, and almost a local synonym to like, prefer; so that this is $\phi_S(S, \Sigma)$:

I drink (take, like) (my) coffee IN THE STATE OF its being black
I endorse him INTO THE STATE OF his having a doctorate.

VI. Φ_2

All zeroing can be classified under:

1. CONSTANTS: 1.1. zeroing of words that are constant to a particular Φ (e.g. <u>wh-</u>, <u>wh-ing</u>);

1.2 zeroing of words that are constant relative to particular words in a particular K position; this is zeroing of appropriate X_{ap}.

2. REPETITION:

Zeroing (in S_2 under C, a in S under Φ_s) of words which are the same as the words in the same position (or in a stated related position) of S_1 or Φ_s.

3. INDEFINITE PRONOUN. Zeroing of disjunctions (N OR N ... OR N) or conjunctions (N and N ... and N) of all acceptable words in a position — that is, zeroing of <u>any N</u>, <u>anything</u>; <u>all the N</u>, <u>all the things</u> and similar indefinite pronouns that are obtained from the above. This occurs in the nilpotent (<u>I eat what he cooks</u>, <u>He cooking tastes good</u>), etc.

4. Pronouning. OK: put this in a special VIa:

VIa. Φ_{PRON}

No particular arrangement is clear at present. Special Φ_m etc for various pron.
automatic pron, e.g. after <u>wh-</u>.
pron. of repetition under Φ_S, Φ Ccoord, Csubord.
indefinite pron.
pron. of identification: demonstrative
etc.

VII. ϕ_m

(from A, to B)

Morphophonemic changes occur (necessarily or optionally) when a particular morpheme or structured sequence of morphemes appears in a particular environment (a certain neighboring morpheme, or a ~~class~~ neighboring class; or a syntactic position in a ϕ or a K?).

If many different A (A_1, A_2, etc.) change to the same form B, we can say that B is a pro-word for the set of A: "degenerate ϕ_m".

Zeroing and pronouning can be considered special cases of ϕ_m, but they are degenerate (because many words can be replaced by the same shape — zero or pronoun).

There are always some special shapes and conditions for particular ϕ_m. Any attempt at a nice organization of ϕ_m can be made only when a great many cases, covering much of the language, are compared. For a small body of material one can only make a simple listing.

Special ϕ_m of intonation (?, !, :, etc.) after ϕ_s, ϕ_c.

Special ϕ_m making D, etc., out of last CK.
Here go some or all <u>chez N.</u>?

Here also pronominal reductions: V l'un l'autre → se V (l'un l'autre)?

VIII. ϕ_p

Permutations, without changing the Σ/Ω character of words:
e.g. in poetic He is a man → A man is he, he remains an subject.

NA → AN

ΣVΩ → ΩΣV
ΣVD → DVΣ
VDΣ

Σ in A → A in Σ

Permutation of and/or S_2 after zeroing to inside S_1
with S_2 to after shared N inside S_1

permutation of XY → YX if X is longer than Y.

No best principle of arrangement is apparent as yet.

IX. COMPLEX ~~UNARIES~~

These are the remaining [S↔S] transformations, ~~they~~ (Most S can be analyzed as) analogic products of simple Φ, but the analysis is less certain than the resultant transformation. A few (e.g. Extraction, Scale sentences) are ← CK, but look like transforms of a single K. No best arrangement can be proposed as yet.

Changes among Φ's deformations, especially after zeroing: e.g. that N should V → for N to V.
" " V_v.

Φ_v → to look like Φ_s by adding Σ's: He took his walk.
Φ_s → " " " Φ_v " zeroing OR INDEFINITE repeated Σ's: I oppose taking bribes.
$\Phi_s(S,\Sigma)$ and $\Phi_s(S,\Omega)$ → to look like CK (see IV 4).
Also here: I know that NV $\xrightarrow{\Phi_m}$ I know (it): NV and this is treated as though I know (it) is $C_{subord}\ S_2$, and we get Φ_p: N, I know (it), V and NV, I know (it).

scale sentence - form.

Extraction of various types.

$\Omega \to \Sigma$ of various types:
Passive, Passive appropriate
Middle, "pronominal", reflexive
Instrumental: $\Sigma V \Omega$ by means of N → N V Ω.

NX → There is NX ; il y a.

$Sn^o\ V_s$ → It V_s Sn^o : It is true that he came.

Pure mirroring (is)
Other mirroring; e.g. N_1 has N_2 → N_2 is N_1's.
Ω a Σ pour Veur.

$\Sigma V D_i$ → Σ is A_i in Ving; some question remain about this form.
Σ is ND → Σ is AN
Note that in deformation NVD → N's AVn.