

Referee report on the article
*Subsystems and regular quotients of
C-systems*, by Vladimir Voevodsky

This paper concerns the basic model structures of dependent type theory and prepares the ground for further work. A new characterization of Cartmell's original contextual categories is given, which provides an essentially algebraic description of the notion and thus makes general algebraic results applicable. Useful criteria for recognizing C-subsystems are developed. Finally a characterization of quotients of a C-systems is given in terms of equivalences of the contexts and elements of types (\widetilde{Ob}) of C-systems.

I think the readability of paper could be improved by indicating a few examples of the notions. Perhaps examples related to univalent foundations could be given? What are regular quotients of presheaf models. Is the Kan simplicial model a C-subsystem of the simplicial set model? These might be questions that a reader asks.

The paper is well written and contains several useful general results about C-systems. It is strongly recommended for publication.

Typos and remarks

- page 1, line -5,-7: missing ")")
- page 2, line 2: "consider" should be "considered"
- page 4, line 19: "we do not know what is $\ell(X)$." would read better as "we do not know what $\ell(X)$ is."
- page 4, line -1: f° should be $f(\circ$

- page 5, operations 4-7: definitions would be clearer if written as "and for such pairs, $T(X,Y) = \dots$ " rather than just "and $T(X,Y) = \dots$ ". Similarly for the other operations.
- page 5, Section 5: Explain why it is called a regular quotient. Does it arise as a coequalizer in some category of C-systems?
- page 5, line -1: *ob* should be *Ob*
- page 7, Lemmas 4.4 – 4.6: should it be rather "conditions (1-6)" than "assumptions"?
- page 10, last equation: $=$ should be \Leftrightarrow .

General remark: In several places abbreviations in formulas have irregular spacing. For instance type setting

`$\{\it Mor\}$` looks better than `$\$Mor\$`

one gets: *Mor* looks better than *Mor*.