

9. We do not know

The “flashbacks” reported above suggest that the question “why the flux rule?” is, from a historical point of view, legitimate independently from the correctness of the general law presented in this paper.

In fact:

1. The Faraday’s physics of lines of magnetic force has not been completely translated into a mathematical form (of course, we are not sure that such a translation is possible).
2. The “flux rule” is not a mathematical translation of the physics of lines of magnetic force.
3. In Maxwell’s Treatise, the “flux rule” is accompanied by “*a general equation of electromotive intensity*” (10) with a correspondent “general equation of induced *emf*” ([11](#)). The velocity appearing in these equations is the velocity of the element of the circuit and not the velocity of the charges contained in it. However, equation (11) coincides with our equation (9) which is the general law of induction written for loops of wire (when the contribution of the charge drift velocity vanishes).
4. The explicit formulation of Lorentz force should have suggested a revision of all the subject.

I believe that there is a stimulating historical problem.