

THE LEL AND ITS DIFFERENTIAL OPERATOR FORMALISM:

PICTORIAL REPRESENTATIONS:

Two months ago we proposed pictures to understand the theory. We can ameliorate the two schemes as follows:

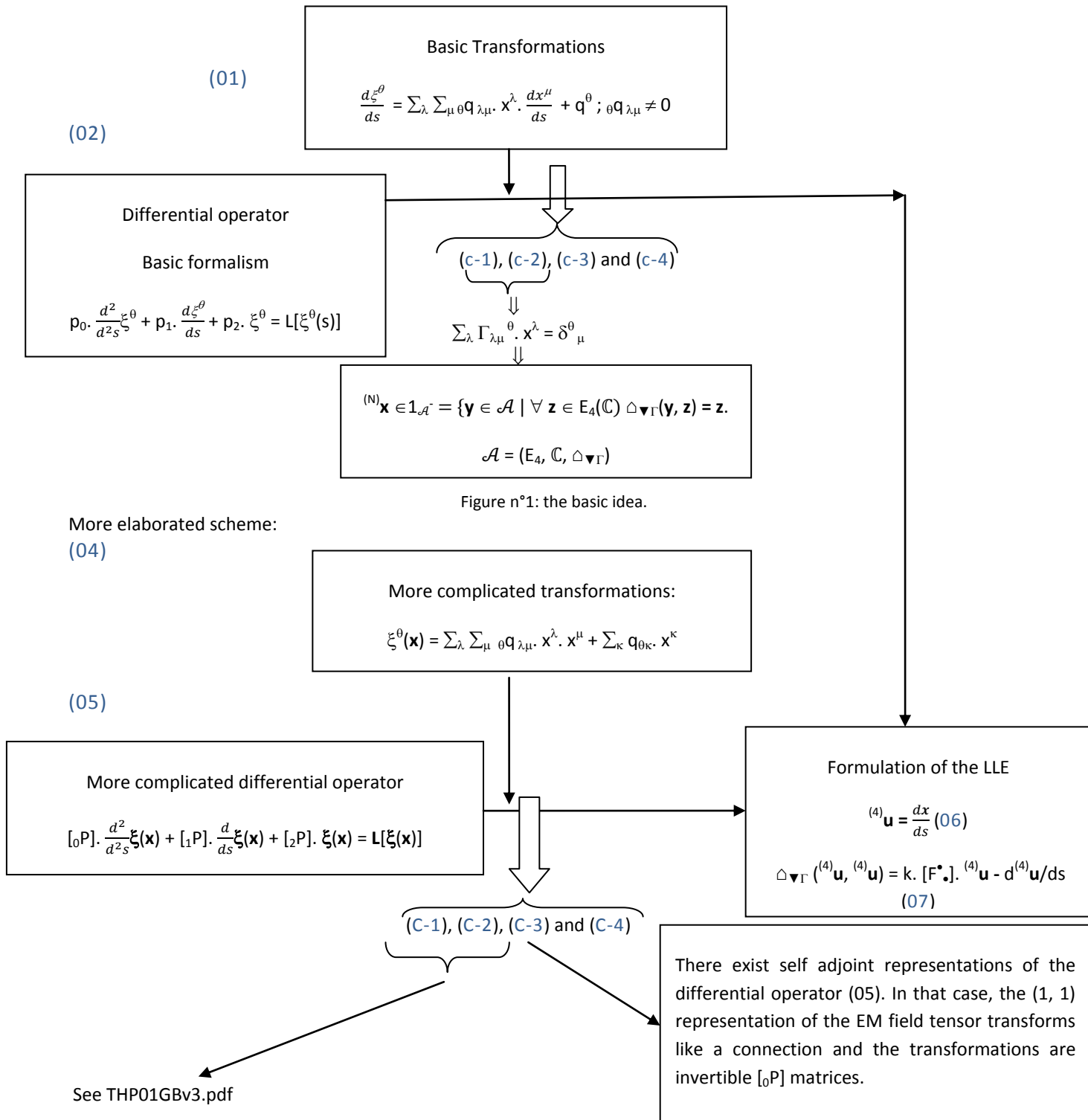


Figure n°2: a more sophisticated illustration of the idea.

REMARK: A LINK BETWEEN DERIVATION AND RESEARCH OF EIGENVALUES.

Let us make some remarks. For example let us consider (01) and try a formal integration:

$$\begin{aligned}
 d\xi^\theta &= \sum_\lambda \sum_{\mu \neq \theta} q_{\lambda\mu} \cdot x^\lambda \cdot dx^\mu + q^\theta \cdot ds \\
 \int d\xi^\theta &= \int (\sum_\lambda \sum_{\mu \neq \theta} q_{\lambda\mu} \cdot x^\lambda \cdot dx^\mu + q^\theta \cdot ds) \\
 \xi^\theta &= \int \sum_\lambda \sum_{\mu \neq \theta} q_{\lambda\mu} \cdot x^\lambda \cdot dx^\mu + \int q^\theta \cdot ds
 \end{aligned}$$

Without entering in the details of a rigorous calculation, we intuitively understand the link with the proposition (04). On the same vein, we also perceive the link between (02) and (05) as soon as we accept to interpret the (p_0, p_1, p_2) as a triplet of eigenvalues, respectively of the triplet $([{}_0P], [{}_1P], [{}_2P])$ of $M_4(K) \times M_4(K) \times M_4(K)$. Conversely (that means going from (05) to (02) whilst one is going from (04) to (01)), this is thus establishing an intuitive and formal link between a “classical” derivation and the research of eigenvalues. Which is a new viewpoint on the question, so far we are well informed.

NEW DIADRAMS:

We can also go further and develop new pictures associated to the theory. This possibility has been recently opened by the THP01GBv3 work.

