vector space), components of pseudo-tensor $T$ of weight $W$, which is $r$-times contra-variant and $s$-times co-variant, are transformed according to the law (see, for example, [13]):

$$\bar{T}^{k_1 k_2 \ldots k_r}_{k'_1 k'_2 \ldots k'_s} \stackrel{\mathrm{def}}{=} \frac{\partial \bar{x}^{k_1}}{\partial x^{i_1}} \frac{\partial \bar{x}^{k_2}}{\partial x^{i_2}} \cdots \frac{\partial \bar{x}^{k_r}}{\partial x^{i_r}} \frac{\partial x^{i'_1}}{\partial \bar{x}^{k'_1}} \frac{\partial x^{i'_2}}{\partial \bar{x}^{k'_2}} \cdots \frac{\partial x^{i'_s}}{\partial \bar{x}^{k'_s}} T^{i_1 i_2 \ldots i_r}_{i'_1 i'_2 \ldots i'_s} J^W. \tag{9}$$

In contrast to the ordinary tensor's component transformation, there is a factor in the form of Jacobian of coordinate transformation

$$J = \frac{\partial \left(x^0, x^1, \ldots, x^{n-1}\right)}{\partial \left(\bar{x}^0, \bar{x}^1, \ldots, \bar{x}^{n-1}\right)} \qquad |J| = \sqrt{-\det\left(g^{ik}\right)} = 1 \tag{10}$$

of power $W$ in equation (9). The weight of the product of two tensors equals the summarized weight of tensors of each factor and convolution of each pair of indices, consisting of the identical upper and lower indices, does not change the weight of tensor; all pseudo-tensors considered in the paper have weight $\pm 1$; in particular, a magnetic charge is a pseudo-scalar, see below, and, hence, we are not far from the fore-quoted Weinberg statement.

The left-hand part of equation (4a) represents by itself a tensor of the third rank, which is antisymmetric in all indices. Having lowered indices of this tensor, multiplied by $e^{mlik}$ and performed convolution with respect to three pairs of identical indices, we obtain equation

$$\frac{\partial F^{\star\, ml}_{A_e}}{\partial x^l} = 0. \tag{11}$$

The relation between components of pseudo-tensor $F^{\star}_{A_e}$, which is dual to $F_{A_e}$, and components of (three-dimensional) vectors of electrical field $\boldsymbol{E}$ and magnetic field $\boldsymbol{H}$ is described as

$$H^{\alpha}_e = -F^{\star\, 0\alpha}_{A_e} \quad (\alpha = 1, 2, 3)\,; \quad E^1_e = -F^{\star\, 23}_{A_e}, \quad E^2_e = -F^{\star\, 31}_{A_e}, \quad E^3_e = -F^{\star\, 12}_{A_e} \tag{12}$$

or

$$F^{\star\, ik}_{A_e} = \begin{pmatrix} 0 & -H^1_e & -H^2_e & -H^3_e \\ H^1_e & 0 & -E^3_e & E^2_e \\ H^2_e & E^3_e & 0 & -E^1_e \\ H^3_e & -E^2_e & E^1_e & 0 \end{pmatrix} \qquad F^{\star}_{A_e\, ik} = \begin{pmatrix} 0 & H^1_e & H^2_e & H^3_e \\ -H^1_e & 0 & -E^3_e & E^2_e \\ -H^2_e & E^3_e & 0 & -E^1_e \\ -H^3_e & -E^2_e & E^1_e & 0 \end{pmatrix}, \tag{13}$$

i.e. in pseudo-tensor $F^{\star}_{A_e}$, as compared to tensor $F_{A_e}$, components of (three-dimensional) vectors of the electrical and magnetic fields change places. So, it would appear reasonable, that the electromagnetic field generated by the current density of magnetic charges