

**Corrections for W. Soergel: Langland's philosophy and  
Koszul duality, pp. 379–414 in the Proceedings of  
NATO ASI 2000 in Constanta of a conference on  
Algebra-Representation Theory, edited by Roggenkamp  
and Stefanescu, published by Kluwer (2001)**

The argument on page 405 at the top needs fixing. This is still a fix on the quick. First we treat the case that  $\mathcal{F} = i_{n!} \underline{B/B}$  is the skyscraper at the one-point cell. In this case the claim follows from the fact that  $i_{n!} i_n^! \mathcal{E} \rightarrow \mathcal{E}$  induces an injection on hypercohomology, which follows from the degeneration of the spectral sequence computing  $\mathbb{H}^\bullet \mathcal{E}$ . Then, for the general case, it will be sufficient to check the commutativity of the following diagrams, for  $\mathcal{A} \in \mathcal{D}(G/P_s)$  and  $\mathcal{F} \in \mathcal{D}(G/B)$  :

$$\begin{array}{ccc} \mathrm{Hom}_{\mathcal{D}}(\pi^* \mathcal{A}, \mathcal{F}) & \longrightarrow & \mathrm{Hom}(\mathbb{H}^\bullet \pi^* \mathcal{A}, \mathbb{H}^\bullet \mathcal{F}) \\ \downarrow \wr & & \downarrow \\ \mathrm{Hom}_{\mathcal{D}}(\mathcal{A}, \pi_* \mathcal{F}) & \longrightarrow & \mathrm{Hom}(\mathbb{H}^\bullet \mathcal{A}, \mathbb{H}^\bullet \pi_* \mathcal{F}) \end{array}$$

for the map on the right coming from  $\mathcal{A} \rightarrow \pi_* \pi^* \mathcal{A}$ , and

$$\begin{array}{ccc} \mathrm{Hom}_{\mathcal{D}}(\mathcal{F}, \pi^! \mathcal{A}) & \longrightarrow & \mathrm{Hom}_C(\mathbb{H}^\bullet \mathcal{F}, \mathbb{H}^\bullet \pi^! \mathcal{A}) \\ \downarrow \wr & & \downarrow \wr \\ \mathrm{Hom}_{\mathcal{D}}(\pi_! \mathcal{F}, \mathcal{A}) & \longrightarrow & \mathrm{Hom}_{C^s}(\mathbb{H}^\bullet \pi_! \mathcal{F}, \mathbb{H}^\bullet \mathcal{A}) \end{array}$$

Here the point is to construct dually a canonical isomorphism  $\mathrm{Hom}_{C^s}(C, \mathbb{H}^\bullet \mathcal{A}) \xrightarrow{\sim} \mathbb{H}^\bullet \pi^! \mathcal{A}$  and show that the resulting diagram will commute. With these diagrams, a non-injective case would lead to a noninjective case with  $\mathcal{F}$  the skyscraper, which we have already shown to be impossible.

It now seems to me as if before 4.2.3 we should rather ask  $\mathcal{M}^x = i_* \tau[\dim Y]$  and in 4.2.3 correspondingly  $\mathrm{hom}_{\mathcal{D}}(L^x, M^x) \neq 0$ . Furthermore it seems as if in 4.2.4 we should ask  $\mathrm{hom}_{\mathcal{D}}(L_x, N_x) \neq 0$ .