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ERRATA AND ADDENDA

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A. B. Givental and P. Molino have pointed out to the author that Theorem 3.1 (*The local structure of Poisson manifolds*, J. Differential Geometry **18** (1983) 523–557) is incorrect; only the *linearization* of the transverse Poisson structure at $\mu \in \mathfrak{g}^*$ is in general isomorphic to the Lie-Poisson structure on $\mathfrak{g}_\mu^*$. The error in the proof is that the linear functions x and y on $\mathfrak{g}_\mu^*$ were extended as linear functions on $\mathfrak{g}^*$ rather than as functions whose hamiltonian vector fields were tangent to the complement V.

Givental gives counterexamples to Theorem 3.1; the simplest is to take

$$\mu = \begin{pmatrix} 0 & 0 & 1 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

in $\mathfrak{sl}(3;\mathbf{R})^*$, which is identified with $\mathfrak{sl}(3;\mathbf{R})$ by the Killing form. In the transverse structure the common zero set of the Casimir functions vanishing at μ is a surface with an isolated singularity of type A_2, while the corresponding set for $\mathfrak{g}_\mu^*$ is a pair of smooth surfaces intersecting along a curve.

Molino points out that Theorem 3.1 is true in the case where one can write $\mathfrak{g} = \mathfrak{g}_\mu \oplus \mathfrak{m}$ with $[\mathfrak{g}_\mu, \mathfrak{m}] \subseteq \mathfrak{m}$. He also observes that the proof of Corollary 3.3 (Duflo-Vergne) is still valid. On the other hand, were Theorem 3.1 true in general, it would have implied the converse to Duflo-Vergne: if $\mathfrak{g}_\mu$ is abelian then $\mu \in \mathfrak{g}^*$ is regular. In fact, this converse is true if $\mathfrak{g}$ is semisimple (A. Medina) but is false in general (M. Duflo).

J. Conn has recently proven that every semisimple $\mathfrak{g}$ is analytically nondegenerate (Ann. of Math. **119** (1984) 576–601) and that every $\mathfrak{g}$ of compact type is C^∞ nondegenerate (Ann. of Math. **121** (1985) 565–593).

The second identity on line 7 of p. 525 is obviously wrong. (P. Morrison noticed this first). It should read

$$\sum_l \left(c_{ijl}c_{lkm} + c_{jkl}c_{lim} + c_{kil}c_{ljm}\right) = 0.$$

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