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ERRATA TO "GAMES AND GENERAL DISTRIBUTIVE LAWS IN BOOLEAN ALGEBRAS"

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We are grateful to B. Balcar for pointing out the following error in [1]: In Example 2 (and hence Example 1), if $\eta > \omega$, then η regular and $\Diamond_{\eta^+}$ do not suffice to construct an η^+-Suslin algebra. The original construction breaks down at the point where we "choose" the appropriate branches B_t, since $\Diamond_{\eta^+}$ is not strong enough to guarantee their existence. Balcar suggested the following modified construction, assuming $\eta^{<\eta} = \eta$ and $\Diamond_{\eta^+}(E(\eta))$.

Replacement for Example 2. *If $\eta^{<\eta} = \eta$, $\lambda \leq min(\kappa, \eta)$, and $\Diamond_{\eta^+}(E(\eta))$, then there is an η^+-Suslin algebra in which $\mathcal{G}^{\eta}_{<\lambda}(\kappa)$ is undetermined.*

Recall that $E(\eta)$ denotes $\{\alpha < \eta^+ : \mathrm{cf}(\alpha) = \eta\}$. Fix a $\Diamond_{\eta^+}(E(\eta))$-sequence; i.e. a sequence $\langle A_\alpha : \alpha \in E(\eta)\rangle$ such that $\forall \alpha \in E(\eta)$, $A_\alpha \subseteq \alpha$ and $\forall A \subseteq \eta^+$, $\{\alpha \in E(\eta) : A \cap \alpha = A_\alpha\}$ is stationary. Let (d) be the statement: "$\forall \beta < \alpha$, if $\mathrm{cf}(\beta) < \eta$, then all β-branches of T_β extend to $\mathrm{Lev}(\beta)$; if $\mathrm{cf}(\beta) = \eta$, then for each $t \in T_\beta$ there is a $(\beta+1)$-branch in $T_{\beta+1}$ containing t." We construct T so that (d) holds for each $\alpha < \eta^+$.

Suppose T_α has been constructed and (d) holds for α. If α is not a limit ordinal, proceed as before. If $\omega \leq \mathrm{cf}(\alpha) < \eta$, then there are at most η-many α-branches through T_α, since $\eta^{<\eta} = \eta$. Extend each of them to $\mathrm{Lev}(\alpha)$. If $\mathrm{cf}(\alpha) = \eta$, consider statements (a)-(c) in the combinations as before. Since (d) holds for α, the appropriate α-branches B_t now exist in T_α. Extend the branches B_t to $\mathrm{Lev}(\alpha)$.

In the argument that $\mathcal{G}^{\eta}_{<\lambda}(\kappa)$ is undetermined in r.o.(T^*) we should have bijected α with η so that P1 will play the partitions $\mathcal{P}_\beta$ $(\beta < \alpha)$ in a game of length η. The proofs that T is an η^+-Suslin tree and $\mathcal{G}^{\eta}_{<\lambda}(\kappa)$ is undetermined in r.o.(T^*) proceed as before, using $\langle A_\alpha : \alpha \in E(\eta)\rangle$ in place of the former $\Diamond_{\eta^+}$-sequence.

The "η" in the first sentence of the paragraph on the construction of $\mathrm{Lev}(\alpha+1)$ should be an "η^+", so that it reads "Let $\alpha < \eta^+$ and suppose $\mathrm{Lev}(\alpha)$ and $\mathcal{P}_\alpha$ have been contructed."

In the first paragraph of the Introduction in [1], a result of Foreman was not stated in its full strength. Foreman showed that (in our notation) for each cardinal η (not just successor cardinals), the (η, ∞)-d.l. is equivalent to P1 not having a winning strategy in the game played like $G(\mathbf{P}, \eta)$ except that P2 chooses first at limit ordinals [2].

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References

1. N. Dobrinen, *Games and general distributive laws in Boolean algebras*, Proc. Amer. Math. Soc. **131** (2003), 309-318.
2. M. Foreman, *Games played on Boolean algebras*, J. Symbolic Logic **48** (3) (1983), 714-723. MR **85h:**03064

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