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Action du groupe des opérateurs de gamétisation sur les identités ω -polynomiales. (French. English summary) [Action of the gametization operator group on ω -polynomial identities]

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Let $\mathbb{K}$ be a field of characteristic $\neq 2$ and denote by $\mathbb{K}\langle X \rangle$ the free noncommutative and nonassociative algebra on the set of variables $X = \{x_1, \dots, x_n\}$. A baric algebra is a pair (A, ω) consisting of an algebra A over $\mathbb{K}$ and a nonzero algebra homomorphism $\omega: A \rightarrow \mathbb{K}$. The gametic algebras are the commutative baric algebras satisfying $xy = \frac{1}{2}\{\omega(x)y + \omega(y)x\}$ for all $x, y \in A$.

The notion of gametization of baric algebras was introduced by the authors and R. Benavides [*J. Algebra* **261** (2003), no. 1, 1–18; [MR1967153 \(2004a:17038\)](#)]. Given $\gamma \in \mathbb{K}^*$, the gametization A_γ of a baric algebra (A, ω) is the algebra with the same underlying vector space as that of A and the new product $(xy)_\gamma = \gamma xy + \frac{1-\gamma}{2}\{(\omega(x)y + \omega(y)x)\}$. The gametization reduces the study of algebras defined by an identity to the study of algebras satisfying simpler identities. Applications of gametization were given by the authors in [*Algebras Groups Geom.* **22** (2005), no. 1, 49–60; [MR2140589 \(2006a:17033\)](#)], and by M. Nourigat and Varro in [*Comm. Algebra* **39** (2011), no. 8, 2764–2778; [MR2834129](#); *Comm. Algebra* **39** (2011), no. 11, 3956–3968; [MR2855103](#)].

After gametization, certain ω -polynomial identities remain invariant and other identities called universal invariants are invariant for every gametization. Using an action of the group of gametization operators on $\mathbb{K}\langle X \rangle$, the authors give all identities which are invariant and universally invariant by gametization.

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*Note: This list reflects references listed in the original paper as accurately as
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