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	id	id6731150766327377815	**id**	id2866145741406869612		
	abstract		**abstract**	Let G be a 1-connected Banach-Lie group or, more generally, a BCH--Lie group. On the complex enveloping algebra $U_\C(\g)$ of its Lie algebra $\g$ we define the concept of an analytic functional and show that every positive analytic functional λ is integrable in the sense that it is of the form $\lambda(D) = \la \dd\pi(D)v, v\ra$ for an analytic vector v of a unitary representation of G. On the way to this result we derive criteria for the integrability of *-representations of infinite dimensional Lie algebras of unbounded operators to unitary group representations. For the matrix coefficient $\pi^{v,v}(g) = \la \pi(g)v,v\ra$ of a vector v in a unitary representation of an analytic Fr\'echet-Lie group G we show that v is an analytic vector if and only if $\pi^{v,v}$ is analytic in an identity neighborhood. Combining this insight with the results on positive analytic functionals, we derive that every local positive definite analytic function on a 1-connected Fr\'echet--BCH--Lie group G extends to a global analytic function.		
	versions		**versions**			