think of looking at the restriction map $\alpha(f) = f \mid [-1, 1], f \in A$, and define a positive linear functional on $\alpha(A)$ by $G(\alpha(f)) = F(f)$ (G is well defined because α is one-to-one by the analytic continuation principle). If G were continuous, we would use the denseness of $\alpha(A)$ in $C[-1, 1]$ to find a positive measure on $[-1, 1]$ which represents G and therefore F. We know retrospectively that G must be continuous by the existence of such representing measure, but it is not easy to prove it.

In fact, the map $\alpha(f) \mapsto f$ is not continuous (if α^{-1} were continuous, then $\alpha(A)$ would be complete. But $\alpha(A)$ contains the polynomials, so it would be $\alpha(A) = C[-1, 1]$, which is incompatible with the existence of continuous non differentiable functions on $[-1, 1]$).

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REFERENCES

[1] Gamelin, T. W. *Uniform Algebras.* Prentice-Hall, Inc., Englewood Cliffs, N.J., 1969.

[2] Gelfand, I. and M. A. Naimark. Rings with involutions and their representations. *Izvestiya Akad. Nauk. SSSR, Ser. Matem., 12* (1948), 445-480 (Russian).

[3] Naimark, M. A. *Normed Rings.* Erven P. Noordhoff, Ltd., Groningen, Netherlands, 1960 (Original Russian edition, 1955).

[4] Rudin, W. *Functional Analysis.* McGraw-Hill, New York, 1973.

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