A linear operator A on E is called <u>p-dissipative</u> if for all $f \in D(A)$ there exists $\phi \in dp(f)$ such that $\mathrm{Re}\langle Af,\phi\rangle \leq 0$.
The arguments given above show that also in the situation considered here A is p-dissipative if and only if

$$p((1-tA)f) \geq p(f)$$

for all $f \in D(A)$, $t \geq 0$.

The results of this section carry over if they are appropriately modified. We explicitly state the most important result for the case when p is the norm. A linear operator A is simply called <u>dissipative</u> if it is N-dissipative where $N(f) = \|f\|$ $(f \in E)$.

<u>Theorem</u> 2.13 (Lumer-Phillips). Let A be a densely defined operator on a complex Banach space E . The following assertions are equivalent.

(i) A is closable and the closure of A is the generator of a contraction semigroup.

(ii) A is dissipative and $(\lambda - A)$ has dense range for some $\lambda > 0$.

3. SEMIGROUPS ON L^∞ AND H^∞

by
Heinrich P. Lotz

In this section we shall prove that on L^∞ , on $H^\infty(D)$, and on some other classical Banach spaces every strongly continuous semigroup of operators is uniformly continuous.

<u>Lemma</u> 3.1. Let $\mathcal{T} = (T(t))_{t\geq 0}$ be a one-parameter semigroup of operators on a Banach space E . Suppose that $s = \limsup_{t\to 0} \|T(t) - Id\|$ is finite. If $\lim_{t\to 0} \|(T(t) - Id)^2\| = 0$, then $\mathcal{T}$ is uniformly continuous.

<u>Proof</u>. The identity $2(T(t) - Id) = T(2t) - Id - (T(t) - Id)^2$ shows