1023-32-397   **Andrew S Raich*** (`andrew.raich@math.wisc.edu`), Texas A&M University, Mailstop 3368, College Station, TX 77843-3368. *Heat kernel estimates with applications to several complex variables.*

An analysis of $\Box_b$ on unbounded weakly pseudoconvex domains leads to the study of the heat equation associated to the weighted $\bar{\partial}$-operator in $\mathbb{C}$. I will discuss the relationship, present estimates of the heat kernel mentioned above, and indicate future directions. (Received September 11, 2006)