$k \neq l$. (i) $k \notin K$, $k \notin J$
$e_k \bar{\iota}_l (d\bar{z}_k \wedge dz_J \wedge d\bar{z}_K) = e_k(2\, dz_J \wedge d\bar{z}_K)$
$= 2\, dz_k \wedge dz_J \wedge d\bar{z}_K =$

$k \neq l$. (i) $k \notin J$

$$e_k \bar{\iota}_l (d\bar{z}_l \wedge dz_J \wedge d\bar{z}_K) = e_K(2\, dz_J \wedge d\bar{z}_K)$$
$$= 2\, dz_k \wedge dz_J \wedge d\bar{z}_K =$$

$$\bar{\iota}_l e_k (d\bar{z}_l \wedge dz_J \wedge d\bar{z}_K) = \bar{\iota}_l (dz_k \wedge d\bar{z}_l \wedge dz_J \wedge d\bar{z}_K)$$
$$= -\bar{\iota}_l (d\bar{z}_l \wedge dz_k \wedge dz_J \wedge d\bar{z}_K) = -2\, dz_k \wedge dz_J \wedge d\bar{z}_K$$

$\Rightarrow$ $e_k \bar{\iota}_l + \bar{\iota}_l e_K = 0$. if $k \notin J$

(ii) $k \in J$.

$\Rightarrow$ $e_k \bar{\iota}_l = 0$ $\quad \bar{\iota}_l e_K = 0$

ii) $l \notin K$

$$e_k \bar{\iota}_l (dz_J \wedge d\bar{z}_K) = 0$$
$$\bar{\iota}_l e_k (dz_J \wedge d\bar{z}_K) = 0$$

Thus we proved $e_k \bar{\iota}_l + \bar{\iota}_l e_k = 0$.

$k = l$. (i) $l = k \notin K$

$$e_k \bar{\iota}_k (dz_J \wedge d\bar{z}_K) = 0 \qquad \bar{\iota}_k e_K (dz_J \wedge d\bar{z}_K) = 0$$

(ii) $e_k \bar{\iota}_k (d\bar{z}_k \wedge dz_J \wedge d\bar{z}_K) = e_K(2\, dz_J \wedge d\bar{z}_K)$
$= 2\, dz_k \wedge dz_J \wedge d\bar{z}_K$
$\bar{\iota}_k e_k (d\bar{z}_k \wedge dz_J \wedge d\bar{z}_K) = \bar{\iota}_k (dz_k \wedge d\bar{z}_k \wedge dz_J \wedge d\bar{z}_K)$
$= -2\, dz_k \wedge dz_J \wedge d\bar{z}_K$
$\Rightarrow$ Again we get $e_K \bar{\iota}_k + \bar{\iota}_k e_k = 0$

$\Rightarrow$ $e_k \bar{\iota}_l + \bar{\iota}_l e_k = 0$. for all k, l. $\lrcorner$)

We also define operators ∂_k and $\bar{\partial}_k$ on $A_c^{P.9}(\mathbb{C}^n)$ by

$$\partial_k \left(\sum \varphi_{I\bar{J}}\, dz_I \wedge d\bar{z}_J\right) = \sum \frac{\partial \varphi_{I\bar{J}}}{\partial z_k}\, dz_I \wedge d\bar{z}_J \quad \text{and}$$