sequence c may be defined as the number of nonzero entries.

$n-k=c_1$, $\quad n-k-c_i = c_1 - c_i$. $\quad n-k-c_1 = 0$.

$\Rightarrow$ (*) $\delta(a,b;c) = \#(\sigma_a \cdot \sigma_b \cdot \sigma_{c_1-c_k, \ldots, c_1-c_2})$ in $G(\ell(c), \ell(c)+c_1)$.

As an immediate consequence, we see that $\delta(a,b;c)=0$ if σ_a or σ_b is null in $G(\ell(c), \ell(c)+c_1)$, i.e., $\delta(a,b;c)=0$ if either

1. $c_1 < a_1$ or $c_1 < b_1$, or
2. $\ell(c) < \ell(a)$ or $\ell(c) < \ell(b)$.

σ_a is null in $G(\ell(c), \ell(c)+c_1)$ if $a_i > \ell(c)+c_1 - \ell(c)$ or $\ell(c) < \ell(a)$. $\Rightarrow$ $a_i > c_1 \Rightarrow a_1 > c_1$

Thus $\sigma_a = 0$ in $G(\ell(c), \ell(c)+c_1)$ if $a_1 > c_1$ or $\ell(c) < \ell(a)$

See p198

Next, note that for any vector space W of dimension n, we have a natural isomorphism

$$* : G(k, W) \longrightarrow G(n-k, W^*)$$

defined by

$$*\Lambda = Ann(\Lambda) = \{ \ell \in W^* : \ell(\Lambda) = 0 \}.$$

$\Lambda \in G(k, W)$. $\Rightarrow$ $*\Lambda = \{ \ell \in W^* ; \ell(\Lambda)=0 \}$ has the same dimension as $\dim \Lambda^{\perp} = n-k$.

$$G(k, W) \xrightarrow{*} G(n-k, W^*) \xrightarrow{L} G(k, W)$$

Here $L : G(n-k, W^*) \longrightarrow G(k, W)$ is defined by $L(\tau) = \{ \Lambda \in G(k; W)$ or $\Lambda \subset W \mid \ell(\Lambda)=0$ for all $\ell \in \tau \}$