

$S, \Omega'$ , for  
 $p_i \in S$

tal theorem of algebra the map

$$\sum q_i \longmapsto (\sigma_1 \{z_i(q_i)\}, \dots, \sigma_d \{z_i(q_i)\})$$

gives a coordinate chart on  $\pi(U_1 \times \dots \times U_d) \subset S^{(d)}$ .

$p_1, \dots, p_g \in S$

⌈ We are going to explain that for  $d=2$  case.

$\sum p_i$  is

We have to check that on  $\pi(U_1 \times U_2) \cap \pi(U'_1 \times U'_2)$   
 $\varphi \circ \varphi^{-1}$  &  $\psi \circ \varphi^{-1}$  are holomorphic, where

$$\varphi: \pi(U_1 \times U_2) \longrightarrow \mathbb{C} \times \mathbb{C}$$

$$q_1 + q_2 \longmapsto (z_1(q_1) + z_2(q_2), z_1(q_1) z_2(q_2))$$

$\sigma_1(z_1, z_2)$        $\sigma_2(z_1, z_2)$

$$\psi: \pi(U'_1 \times U'_2) \longrightarrow \mathbb{C} \times \mathbb{C}$$

$$q'_1 + q'_2 \longmapsto (z'_1(q'_1) + z'_2(q'_2), z'_1(q'_1) z'_2(q'_2))$$

$\sigma'_1(z'_1, z'_2)$        $\sigma'_2(z'_1, z'_2)$

ve divisors

d-tuples

distinct.

$S \times S \times \dots \times S$

the symm-

herits from

in fact, the

the struct-

$p_i \in S^{(d)}$

hood  $U_i$  of

$\neq p_j$  and

let  $\sigma_1, \sigma_2, \dots, \sigma_d$

e fundamen-

(i)  $U_1 \cap U_2 = \emptyset$  &  $U'_1 = U'_2$   $\Downarrow$   $\Downarrow$   
 $\Rightarrow z'_1 = z'_2 \Rightarrow q_1 + q_2 \in \pi(U_1 \times U_2) \cap \pi(U'_1 \times U'_2)$   
 $\Rightarrow \exists$  open sets  $V_1 \ni q_1, V_2 \ni q_2$  s.t.  $V_1, V_2 \subset U'_1 = U'_2$   
 $V_1 \subset U_1, V_2 \subset U_2, \pi(V_1 \times V_2) \subset \pi(U_1 \times U_2)$   
 $\cap \pi(U'_1 \times U'_2)$ , and  $V_1 \cap V_2 = \emptyset$ .

$$\begin{array}{ccc} \mathbb{C} & & \mathbb{C} \\ z_1 \uparrow & & \uparrow z_2 \\ V_1 \times V_2 & & \end{array}$$

$\Rightarrow z'_1$  is a function of  $z_1$

$z'_2$  " of  $z_2$

$$\begin{array}{ccc} z'_1 \downarrow & & \downarrow z'_2 \\ \mathbb{C} & & \mathbb{C} \end{array}$$

But since  $z'_1 = z'_2$  as a variable,  
 we may write

$$z'_1(z_1) = f(z_1) \leftarrow$$

$$z'_2(z_2) = f(z_2)$$

Non sense

