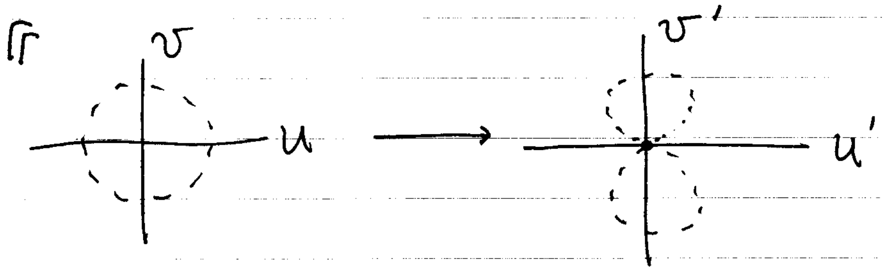
$$(u, v) \longmapsto (u, uv),$$

which are not open. In general, they share most of the properties of maps in one variable, as we shall now prove.



If $u=0$, then $uv=0$. $\Rightarrow$ The image does not contain any open set in u'-axis.

For this we need the following

Lemma. For $h(z) \in \mathcal{O}(U)$, the trace

$$\sigma_h(W) = \sum_{\nu=1}^{d} h(z_\nu(W))$$

is a holomorphic function of $W \in \mathcal{W}$.

Proof. We consider σ_h as a distribution operating on the compactly supported (n, n) forms $A_c^{n,n}(\mathcal{W})$ by the rule

$$\sigma_h(\varphi) = \int_{\mathcal{W}} \sigma_h(W)\,\varphi(W)$$

$$= \int_U h(z)\,(f^*\varphi)(z),$$

where $\varphi \in A_c^{n,n}(W)$.