We can likewise fit the map i into an exact sequence: for $p \in V$, the sequence

$$0 \longrightarrow N^*_{V.p} \longrightarrow T_p^{*'}(M) \longrightarrow T_p^{*'}(V) \longrightarrow 0,$$

yields, by linear algebra,

$$0 \longrightarrow N^*_{V.p} \otimes \Lambda^{p-1} T_p^{*'}(V) \longrightarrow \Lambda^p T_p^{*'}(M) \longrightarrow \Lambda^p T_p^{*'}(V) \longrightarrow 0,$$

and consequently an exact sequence of sheaves on V

$$0 \longrightarrow \Omega_V^{p-1}(N_V^*) \longrightarrow \Omega^p_{M/V} \xrightarrow{i} \Omega^p_V \longrightarrow 0.$$

Pf

$$0 \longrightarrow T_p'V \longrightarrow T_p'M \longrightarrow \frac{T_p'M}{T_p'V} = N_{V.p} \longrightarrow 0$$

Take $\mathrm{Hom}(\_, \mathbb{C})$,

$$0 \longrightarrow N^*_{V.p} \longrightarrow T_p^{*'}M \longrightarrow T_p^{*'}(V) \longrightarrow 0.$$

, by tensoring with $\Lambda^{p-1} T_p^{*'}(V)$,

$$0 \longrightarrow N^*_{V.p} \otimes \Lambda^{p-1} T_p^{*'}(V) \longrightarrow T_p^{*'}M \otimes \Lambda^{p-1} T_p^{*'}(V) \longrightarrow T_p^{*'}(V) \otimes \Lambda^{p-1} T_p^{*'}(V) \longrightarrow 0$$

since $\Lambda^{p-1}(T_p^{*'}(V))$ is torsion-free.

$\Rightarrow \quad T_p^{*'}(V) \otimes$

$\Rightarrow \quad \dim T_p^{*'}M = n, \quad \dim T_p^{*'}V = n-1 \quad \dim N^*_{V.p} = 1$

$\Rightarrow$ We have only to show that, given an exact sequence $0 \longrightarrow V \xrightarrow{f} \mathbb{C}^n \xrightarrow{\pi} \mathbb{C}^{n-1} \longrightarrow 0.$