$\Rightarrow$ $g^{-1}(U)$ is an open subset of $N-W$ where W is an analytic subvariety of N, s.t $\operatorname{cod} W \geq 2$
$g: N-W \longrightarrow M$ is holomorphic.
$\Rightarrow$ Clearly $g^{-1}(D)$ is analytic in $g^{-1}(U)$.
$\Rightarrow$ $\overline{g^{-1}(D)}$ is analytic in N, since analyticity is a local problem, and whenever we have a point $q \in \overline{g^{-1}(D)} \cap W$, consider an open set $O_q \ni q$ s.t $O_q \cong \Delta$ O_q is small, and then, by using the Levi extension theorem II, $O_q \cap \overline{g^{-1}(D)}$ is analytic in O_q. "

Examples of Rational and Birational Maps

1. Any holomorphic map $M \to \mathbb{P}^n$ is trivially rational.
2. If $\tilde{M} \xrightarrow{\pi} M$ is the blow-up of an algebraic variety M at a collection of points $\{p_i\}$, then the inverse map
$$M - \{p_i\} \xrightarrow{\pi^{-1}} \tilde{M}$$
is clearly rational, so π is a rational isomorphism.

「 By P184, $\pi: \tilde{U}_i \longrightarrow U$
$$(z(i)_1, \cdots z(i)_n) \mapsto (z(i)_i \cdot z(i)_1, \cdots z(i)_i, \cdots z(i)_i \cdot z(i)_n).$$
$\Rightarrow$ $U \longrightarrow \tilde{U}_i$
$$(z_1, \cdots z_n) \longmapsto \left(\frac{z_1}{z_i}, \frac{z_2}{z_i}, \cdots z_i, \cdots \frac{z_n}{z_i}\right)$$
$\Rightarrow$ $\frac{z_1}{z_i}, \cdots \frac{z_n}{z_i}$ are meromorphic functions. 」

A holomorphic map $f: \tilde{M} \longrightarrow \mathbb{P}^n$ thus gives a rational map