$\Rightarrow \ \varphi_\Delta = \sum (-1)^{p+q} \varphi_{p,q,\mu,\mu}$. Here we assumed a lot of things.
See the next paragraph.

This tells us nothing essentially new: in case M is Kähler, this follows from the ordinary Lefschetz fixed-point formula and the Hodge decomposition; in general, it follows from the Lefschetz formula and the Frölicher spectral sequence relating Dolbeault and deRham cohomology given in Section 5 of this chapter. To obtain finer information about the action of f on the Dolbeault groups of M, let $\eta_\Delta^{p,q}$ be the (p,q)th component of the class η_Δ under the decomposition into bitype.

$$H_{\bar\partial}^{n,n}(M \times M) = \bigoplus_{p,q} (\pi_1^* H_{\bar\partial}^{p,q}(M) \otimes \pi_2^* H_{\bar\partial}^{n-p,n-q}(M)),$$

and set

$$\eta_\Delta^0 = \sum_q \eta_\Delta^{0,q}.$$

See P103 bottom.

η_Δ^0 is then represented by the form

$$\varphi_\Delta^0 = \sum_{q,\mu} (-1)^q \varphi_{0,q,\mu,\mu},$$

and so the value of η_Δ^0 on the cycle Γ_f is given by

$$\eta_\Delta^0(\Gamma_f) = \int_{\Gamma_f} \varphi_\Delta^0 = \sum_q (-1)^q \int_M \sum_\mu \phi_{0,q,\mu} \wedge f^* \psi^*_{n,n-q,\mu}$$

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