such that $b \sqcap c = \bot$ and $b \sqcup c = a$. We will prove that $b$ is complementive to $a$ iff $b$ is substractive from $a$ and $b \sqsubseteq a$.

DEFINITION 6. Call $a$ and $b$ of a poset $\mathfrak{A}$ *intersecting*, denoted $a \not\asymp b$, when there exists a non-least element $c$ such that $c \sqsubseteq a \wedge c \sqsubseteq b$.

DEFINITION 7. $a \asymp b \overset{\text{def}}{=} \neg(a \not\asymp b)$.

DEFINITION 8. I call elements $a$ and $b$ of a poset $\mathfrak{A}$ *joining* and denote $a \equiv b$ when there are no non-greatest element $c$ such that $c \sqsupseteq a \wedge c \sqsupseteq b$.

DEFINITION 9. $a \not\equiv b \overset{\text{def}}{=} \neg(a \equiv b)$.

OBVIOUS 10. $a \not\asymp b$ iff $a \sqcap b$ is non-least, for every elements $a$, $b$ of a meet-semilattice.

OBVIOUS 11. $a \equiv b$ iff $a \sqcup b$ is the greatest element, for every elements $a$, $b$ of a join-semilattice.

I extend the definitions of pseudocomplement and dual pseudocomplement to arbitrary posets (not just lattices as it is customary):

DEFINITION 12. Let $\mathfrak{A}$ be a poset. *Pseudocomplement* of $a$ is

$$\max\left\{\frac{c \in \mathfrak{A}}{c \asymp a}\right\}.$$

If $z$ is the pseudocomplement of $a$ we will denote $z = a^*$.

DEFINITION 13. Let $\mathfrak{A}$ be a poset. *Dual pseudocomplement* of $a$ is

$$\min\left\{\frac{c \in \mathfrak{A}}{c \equiv a}\right\}.$$

If $z$ is the dual pseudocomplement of $a$ we will denote $z = a^+$.