Class	**Definition**	**Base(s)**
BF	all Boolean functions	$\{and, not\}$
R_0	$\{ f \in BF \mid f$ is 0-reproducing $\}$	$\{and, xor\}$
R_1	$\{ f \in BF \mid f$ is 1-reproducing $\}$	$\{or, x \oplus y \oplus 1\}$
R_2	$R_1 \cap R_0$	$\{or, x \wedge (y \oplus z \oplus 1)\}$
M	$\{ f \in BF \mid f$ is monotonic $\}$	$\{and, or, c_0, c_1\}$
M_1	$M \cap R_1$	$\{and, or, c_1\}$
M_0	$M \cap R_0$	$\{and, or, c_0\}$
M_2	$M \cap R_2$	$\{and, or\}$
S_0^n	$\{ f \in BF \mid f$ is 0-separating of degree $n \}$	$\{imp, \mathrm{dual}(h_n)\}$
S_0	$\{ f \in BF \mid f$ is 0-separating $\}$	$\{imp\}$
S_1^n	$\{ f \in BF \mid f$ is 1-separating of degree $n \}$	$\{x \wedge \overline{y},\, h_n\}$
S_1	$\{ f \in BF \mid f$ is 1-separating $\}$	$\{x \wedge \overline{y}\}$
S_{02}^n	$S_0^n \cap R_2$	$\{x \vee (y \wedge \overline{z}), \mathrm{dual}(h_n)\}$
S_{02}	$S_0 \cap R_2$	$\{x \vee (y \wedge \overline{z})\}$
S_{01}^n	$S_0^n \cap M$	$\{\mathrm{dual}(h_n), c_1\}$
S_{01}	$S_0 \cap M$	$\{x \vee (y \wedge z), c_1\}$
S_{00}^n	$S_0^n \cap R_2 \cap M$	$\{x \vee (y \wedge z), \mathrm{dual}(h_n)\}$
S_{00}	$S_0 \cap R_2 \cap M$	$\{x \vee (y \wedge z)\}$
S_{12}^n	$S_1^n \cap R_2$	$\{x \wedge (y \vee \overline{z}), h_n\}$
S_{12}	$S_1 \cap R_2$	$\{x \wedge (y \vee \overline{z})\}$
S_{11}^n	$S_1^n \cap M$	$\{h_n, c_0\}$
S_{11}	$S_1 \cap M$	$\{x \wedge (y \vee z), c_0\}$
S_{10}^n	$S_1^n \cap R_2 \cap M$	$\{x \wedge (y \vee z), h_n\}$
S_{10}	$S_1 \cap R_2 \cap M$	$\{x \wedge (y \vee z)\}$
D	$\{ f \mid f$ is self-dual $\}$	$\{x\overline{y} \vee x\overline{z} \vee \overline{yz}\}$
D_1	$D \cap R_2$	$\{xy \vee x\overline{z} \vee y\overline{z}\}$
D_2	$D \cap M$	$\{xy \vee yz \vee xz\}$
L	$\{ f \mid f$ is linear$\}$	$\{xor, c_1\}$
L_0	$L \cap R_0$	$\{xor\}$
L_1	$L \cap R_1$	$\{eq\}$
L_2	$L \cap R_2$	$\{x \oplus y \oplus z\}$
L_3	$L \cap D$	$\{x \oplus y \oplus z \oplus c_1\}$
V	$\{ f \mid f$ is an n-ary or-function or a constant function$\}$	$\{or, c_0, c_1\}$
V_0	$[\{or\}] \cup [\{c_0\}]$	$\{or, c_0\}$
V_1	$[\{or\}] \cup [\{c_1\}]$	$\{or, c_1\}$
V_2	$[\{or\}]$	$\{or\}$
E	$\{ f \mid f$ is an n-ary and-function or a constant function$\}$	$\{and, c_0, c_1\}$
E_0	$[\{and\}] \cup [\{c_0\}]$	$\{and, c_0\}$
E_1	$[\{and\}] \cup [\{c_1\}]$	$\{and, c_1\}$
E_2	$[\{and\}]$	$\{and\}$
N	$[\{not\}] \cup [\{c_0\}] \cup [\{c_1\}]$	$\{not, c_1\}$, $\{not, c_0\}$
N_2	$[\{not\}]$	$\{not\}$
I	$[\{id\}] \cup [\{c_1\}] \cup [\{c_0\}]$	$\{id, c_0, c_1\}$
I_0	$[\{id\}] \cup [\{c_0\}]$	$\{id, c_0\}$
I_1	$[\{id\}] \cup [\{c_1\}]$	$\{id, c_1\}$
I_2	$[\{id\}]$	$\{id\}$

Figure 1: List of all Boolean clones with bases ($h_n = \bigvee_{i=1}^{n+1} x_1 \cdots x_{i-1} x_{i+1} \cdots x_{n+1}$ and $\mathrm{dual}(f)(a_1, \ldots, a_n) = \neg f(\overline{a_1}, \ldots, \overline{a_n})$).

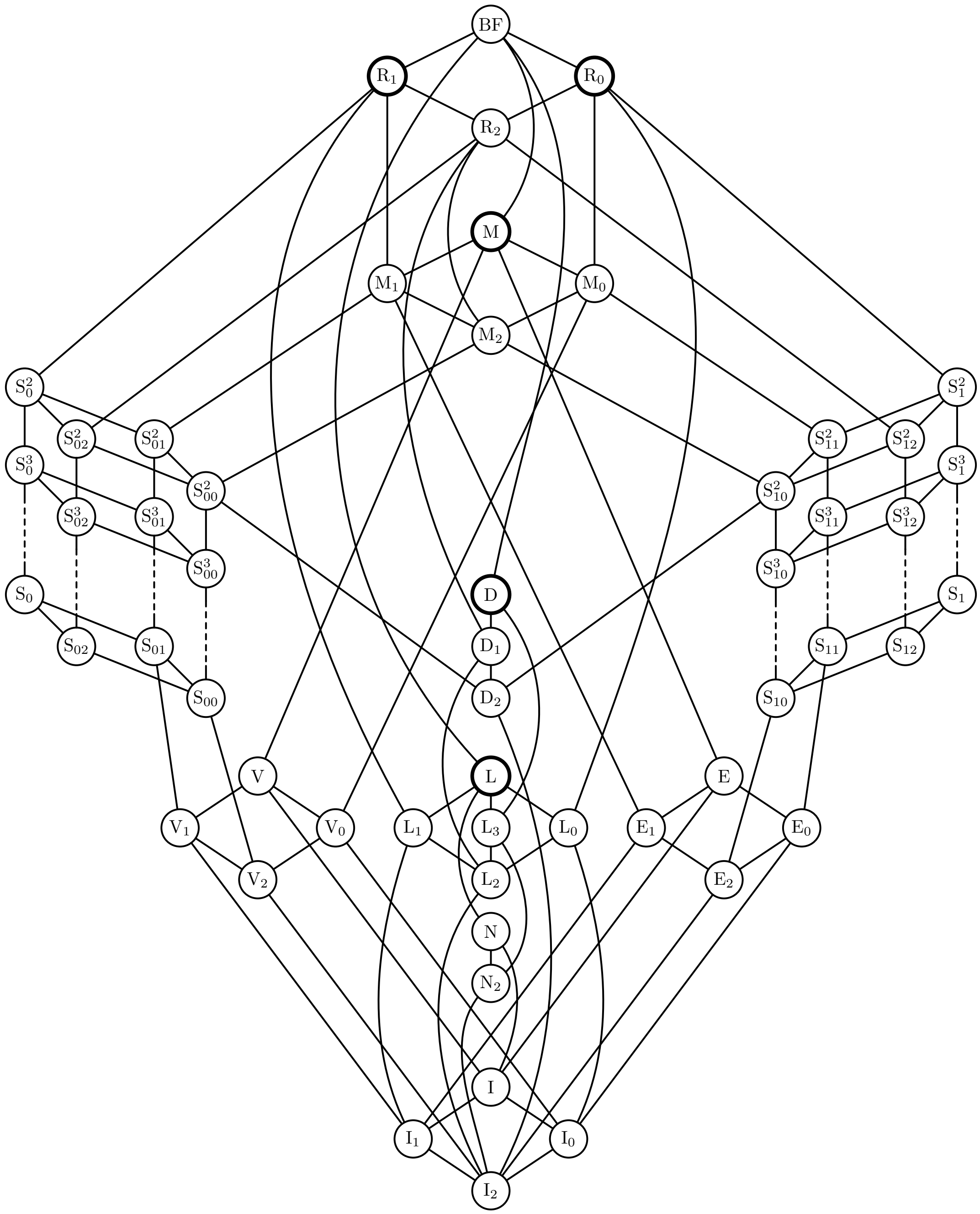

Figure 2: Graph of all Boolean clones.

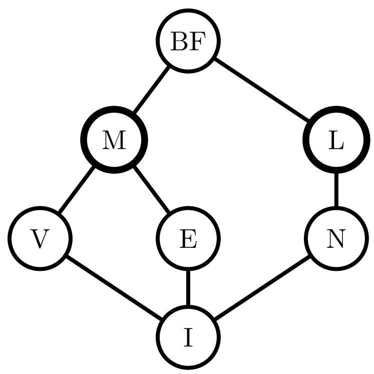

Figure 3: Graph of all Boolean clones that contain all constant functions

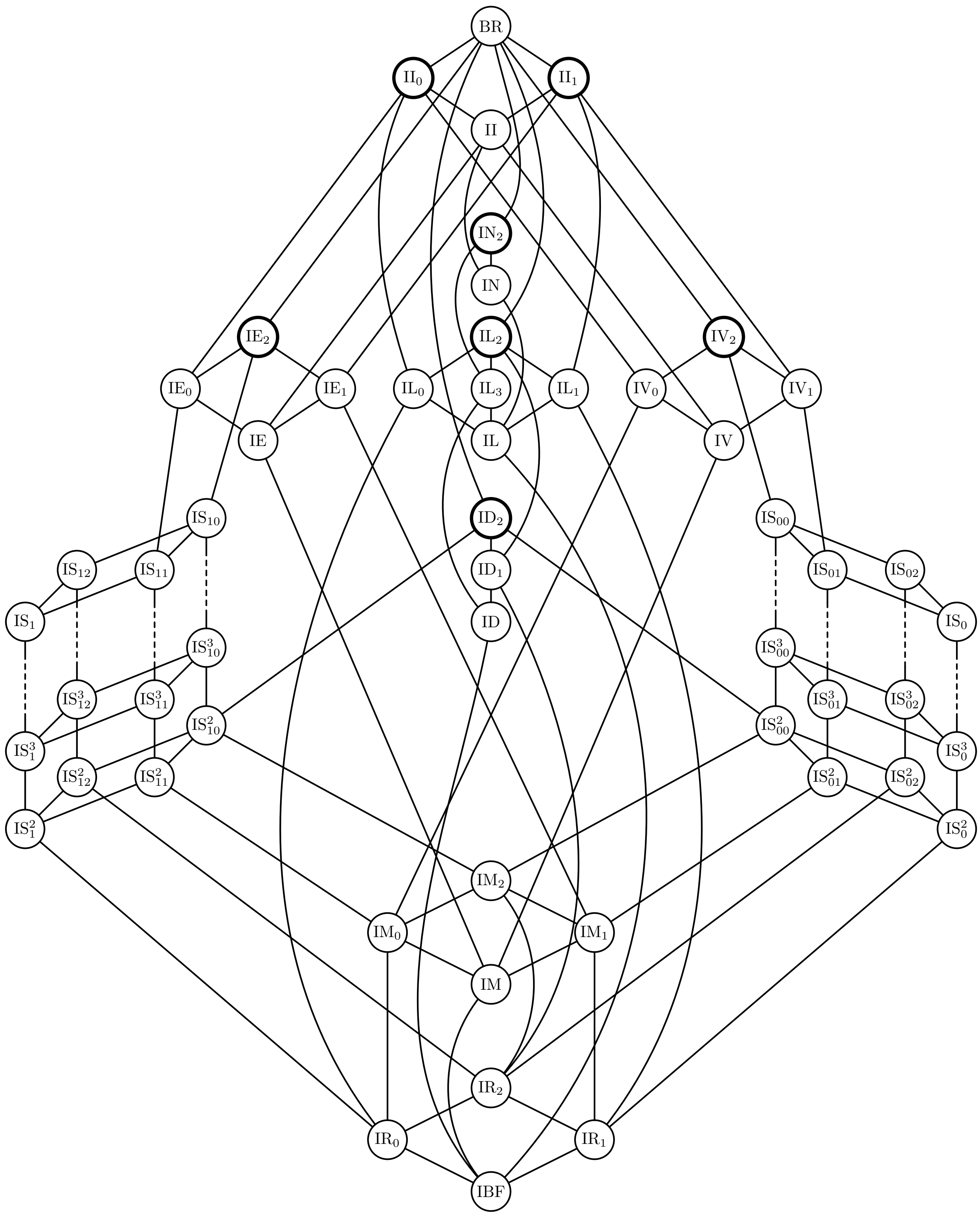

Figure 4: Graph of all Boolean co-clones

Cl.	Or.	Remark	Base(s) of corresponding co-clone
BF	0		$\{=\}$, $\{\emptyset\}$
R_0	1	dual of R_1	$\{\overline{x}\}$
R_1	1		$\{x\}$
R_2	1	$\mathrm{R}_0 \cap \mathrm{R}_1$	$\{x, \overline{x}\}$,$\{x\overline{y}\}$
M	2		$\{x \rightarrow y\}$
M_1	2	$\mathrm{M} \cap \mathrm{R}_1$	$\{x \rightarrow y, x\}$,$\{x \wedge (y \rightarrow z)\}$
M_0	2	$\mathrm{M} \cap \mathrm{R}_0$	$\{x \rightarrow y, \overline{x}\}$,$\{\overline{x} \wedge (y \rightarrow z)\}$
M_2	2	$\mathrm{M} \cap \mathrm{R}_2$	$\{x \rightarrow y, x, \overline{x}\}$,$\{x \rightarrow y, \overline{x \rightarrow y}\}$, $\{x\overline{y} \wedge (u \rightarrow v)\}$
S_0^m	m		$\{\mathrm{OR}^m\}$
S_1^m	m	dual of S_0^m	$\{\mathrm{NAND}^m\}$
S_0	∞	$\cap_{m\geq 2}\mathrm{S}_0^m$	$\{\mathrm{OR}^m \mid m \geq 2\}$
S_1	∞	dual of S_0	$\{\mathrm{NAND}^m \mid m \geq 2\}$
S_{02}^m	m	$\mathrm{S}_0^n \cap \mathrm{R}_2$	$\{\mathrm{OR}^m, x, \overline{x}\}$
S_{02}	∞	$\mathrm{S}_0 \cap \mathrm{R}_2$	$\{\mathrm{OR}^m \mid m \geq 2\} \cup \{x, \overline{x}\}$
S_{01}^m	m	$\mathrm{S}_0^m \cap \mathrm{M}$	$\{\mathrm{OR}^m, x \rightarrow y\}$
S_{01}	∞	$\mathrm{S}_0 \cap \mathrm{M}$	$\{\mathrm{OR}^m \mid m \geq 2\} \cup \{x \rightarrow y\}$
S_{00}^m	m	$\mathrm{S}_0^n \cap \mathrm{R}_2 \cap \mathrm{M}$	$\{\mathrm{OR}^m, x, \overline{x}, x \rightarrow y\}$
S_{00}	∞	$\mathrm{S}_0 \cap \mathrm{R}_2 \cap \mathrm{M}$	$\{\mathrm{OR}^m \mid m \geq 2\} \cup \{x, \overline{x}, x \rightarrow y\}$
S_{12}^m	m	dual of S_{02}^m	$\{\mathrm{NAND}^m, x, \overline{x}\}$
S_{12}	∞	dual of S_{02}	$\{\mathrm{NAND}^m \mid m \geq 2\} \cup \{x, \overline{x}\}$
S_{11}^m	m	dual of S_{01}^m	$\{\mathrm{NAND}^m, x \rightarrow y\}$
S_{11}	∞	dual of S_{01}	$\{\mathrm{NAND}^m \mid m \geq 2\} \cup \{x \rightarrow y\}$
S_{10}^m	m	dual of S_{00}^m	$\{\mathrm{NAND}^m, x, \overline{x}, x \rightarrow y\}$
S_{10}	∞	dual of S_{00}	$\{\mathrm{NAND}^m \mid m \geq 2\} \cup \{x, \overline{x}, x \rightarrow y\}$
D	2		$\{x \oplus y\}$
D_1	2	$\mathrm{D} \cap \mathrm{R}_1$	$\{x \oplus y, x\}$, every $R \in \{\{(a_1, a_2, a_3), (b_1, b_2, b_3)\} \mid$ $\exists c \in \{1, 2\}$ such that $\Sigma_{i=1}^3 a_i = \Sigma_{i=1}^3 b_i = c\}$
D_2	2	$\mathrm{D} \cap \mathrm{M}$	$\{x \oplus y, x \rightarrow y\}$,$\{x\overline{y} \vee \overline{x}yz\}$
L	4		$\{\mathrm{EVEN}^4\}$
L_0	3	$\mathrm{L} \cap \mathrm{R}_0$	$\{\mathrm{EVEN}^4, \overline{x}\}$,$\{\mathrm{EVEN}^3\}$
L_1	3	$\mathrm{L} \cap \mathrm{R}_1$	$\{\mathrm{EVEN}^4, x\}$,$\{\mathrm{ODD}^3\}$
L_2	3	$\mathrm{L} \cap \mathrm{R}_2$	$\{\mathrm{EVEN}^4, x, \overline{x}\}$, every $\{\mathrm{EVEN}^n, (1)\}$ where $n \geq 3$ is odd
L_3	4	$\mathrm{L} \cap \mathrm{D}$	$\{\mathrm{EVEN}^4, x \oplus y\}$,$\{\mathrm{ODD}^4\}$
V	3		$\{x \vee y \vee \overline{z}\}$
V_0	3	$\mathrm{V} \cap \mathrm{R}_0$	$\{x \vee y \vee \overline{z}, \overline{x}\}$
V_1	3	$\mathrm{V} \cap \mathrm{R}_1$	$\{x \vee y \vee \overline{z}, x\}$
V_2	3	$\mathrm{V} \cap \mathrm{R}_2$	$\{x \vee y \vee \overline{z}, x, \overline{x}\}$
E	3	dual of V	$\{\overline{x} \vee \overline{y} \vee z\}$
E_1	3	dual of V_0	$\{\overline{x} \vee \overline{y} \vee z, x\}$
E_0	3	dual of V_1	$\{\overline{x} \vee \overline{y} \vee z, \overline{x}\}$
E_2	3	dual of V_2	$\{\overline{x} \vee \overline{y} \vee z, x, \overline{x}\}$
N	3		$\{\mathrm{DUP}^3\}$
N_2	3	$\mathrm{N} \cap \mathrm{L}_3$	$\{\mathrm{DUP}^3, \mathrm{EVEN}^4, x \oplus y\}$, $\{\mathrm{NAE}^3\}$
I	3	$\mathrm{L} \cap \mathrm{M}$	$\{\mathrm{EVEN}^4, x \rightarrow y\}$
I_0	3	$\mathrm{L} \cap \mathrm{M} \cap \mathrm{R}_0$	$\{\mathrm{EVEN}^4, x \rightarrow y, \overline{x}\}$,$\{\mathrm{DUP}^3, x \rightarrow y\}$
I_1	3	$\mathrm{L} \cap \mathrm{M} \cap \mathrm{R}_1$	$\{\mathrm{EVEN}^4, x \rightarrow y, x\}$,$\{x \vee (x \oplus z)\}$
I_2	3	$\mathrm{L} \cap \mathrm{M} \cap \mathrm{R}_2$	$\{\mathrm{EVEN}^4, x \rightarrow y, x, \overline{x}\}$, $\{1text{-}IN{-}3\}$,$\{x \rightarrow (y \oplus z)\}$

Figure 5: Bases for all Boolean co-clones