Note some theorems were moved, so the numbering below may be wrong (theorem 4.71 was inserted).

Definition 2.29: Removed erroneous notation $\min X$ and $\max X$ for minimal and maximal elements of a poset.

Definition 2.35: supremum $\rightarrow$ infimum.

Proposition 2.59: $\cup \rightarrow \sqcup$.

Definition 2.69: infinitely $\rightarrow$ infinite.

Theorem 2.76: a $\rightarrow$ an, infinitely $\rightarrow$ infinite.

Definition 2.93: meet $\rightarrow$ join.

Theorem 2.102: Messed lower and upper adjoints.

Proof of theorem 2.103: $y \rightarrow x$; messed lower and upper adjoints.

Section title: Co-Browerian lattices $\rightarrow$ Co-Brouwerian lattices.

Theorem 2.122: $\subseteq \rightarrow \sqsubseteq$.

Theorem 3.6: Added the word "monotone".

Proof of proposition 3.9: $\notin \rightarrow \in$.

Theorem 3.14: multiple errors in formulas.

New proposition 3.15: Every boolean lattice is sepable.

Definition 3.44: Added words "with the same source and destination".

After definition 3.55: Added forgotten "entirely defined, injective, and surjective".

Proof of lemma 3.87: $\operatorname{dom} F \rightarrow \{i\}$.

Proof of lemma 3.88: More detailed proof.

Proof of lemma 3.90: More detailed proof.

Proof of lemma 3.91: More detailed proof.

Definition 4.7: $\mathfrak{A} \rightarrow \mathfrak{Z}$.

Definitions 4.13 and 4.14: Added words "for an element a of a filtrator" for clarity.

4.2.6 Atomic Filter Objects $\rightarrow$ Atomic Elements of a Filtrator.

Theorem 4.49: theorem 2.101 $\rightarrow$ obvious 4.24.

Proposition 4.51: Strenghtened: distributive lattice $\rightarrow$ starrish join-semilattice.

Proof of theorem 4.58: 1. $\bigcap \rightarrow \bigsqcap$; 2. Added words "by the assumption of induction"; 3. $\operatorname{card} A \rightarrow \operatorname{card} T$.

Theorem 4.69 and it's proof: $\mathfrak{P} \rightarrow \mathfrak{Z}$. Also: $\mathfrak{A} \rightarrow \mathfrak{Z}$.

Theroem 4.70: Strenghtened: distributive $\rightarrow$ starrish.

Definition 4.71: $\mathfrak{A} \rightarrow \mathfrak{Z}$.

Corollary 4.91: "join-closed" $\rightarrow$ "with join closed core".

Propositon 4.94 and theorem 4.71 are now separated into two distinct statements.

Theorem 4.99: Removed superfluous theorem conditions. Rewritten the proof.

Proof of theorem 4.105: clarified.

Theorem 4.112 and 4.72 are now separated into two distinct statements.

Lemmas 4.115 and 4.73 are now separated into two distinct statements.

Proof of theorem 4.137: Last paragraph modified.

Proposition 4.140: Added the word "distributive".

Theroem 4.142: Strenghtened: atomistic $\rightarrow$ atomic.

Proof of theorem 4.144: 1. $\mathcal{X} \rightarrow \operatorname{up} \mathcal{X}$. 2. proof clairified.

Proof of theorem 4.150: Added: "Core part and dual core part are defined because the core is a complete lattice."

Proof of proposition 4.159: $= \rightarrow \sim$.

Proof of proposition 4.161: $\mathfrak{A} \rightarrow \mathfrak{Z}$.

Proposition 4.178: $\max a \rightarrow \max \operatorname{down} a$.

Proposition 4.184: Removed $S \in \mathscr{P}\mathfrak{F} \setminus \{\emptyset\}$.

Proof of lemma 4.231: Removed "X'".

Corollary 3.232: $\mathcal{G} \rightarrow \mathcal{A}$.

Proof of theorem 4.233: $X \rightarrow \operatorname{card} X$.

Proof of example 4.235: $\uparrow x = \{a, 1\} \rightarrow \operatorname{up} x = \{x, a, 1\}$.

Proposition 4.247: $S \rightarrow [S]$.

Proposition 5.14: "$\in a$" removed.

Proposition 5.21: $\Delta \rightarrow \partial\Delta$.

Proof of proposition 5.33: $X \rightarrow U$.

6.1 Informal introduction into funcoids: $\alpha \rightarrow \beta$.

Proposition 6.13: Strenghtened (removed the word "small").

Proof of proposition 6.16: $\beta_1 \rightarrow \beta_2$.

Proof of theorem 6.27: 1. $Y \in \mathscr{P}B \rightarrow X \in \mathscr{P}A$. 2. $a' \rightarrow \alpha'$.

Theroem 6.31: funcoids $\rightarrow$ funcoid.

Proof of lemma 6.33: $B \in \langle F \rangle^* X \rightarrow B \in \left\langle \uparrow^{\mathsf{FCD}(\operatorname{Src} f; \operatorname{Dst} f)} F_B \right\rangle^* X$.

Proof of lemma 6.34: $X \rightarrow \mathcal{X}$.

Proof of theorem 6.36: Refer to a less general proposition (4.189).

Added remark 6.40.

Before theorem 6.42: $f \rightarrow g$.

Proof of theorem 6.60: corollary 4.126 $\rightarrow$ proposition 4.197.

Theorem 6.61: $A \rightarrow B$.

Proof of theorem 6.61: 1. $\alpha' \rightarrow \alpha$. 2. $\sqcup \rightarrow \cup$. 3, $A \rightarrow B$.

Proposition 6.67: $= \rightarrow \sqsubseteq$.

Proof of theorem 6.74: Forgotten X.

Proof of theorem 6.96: $Y \rightarrow \uparrow^B Y$.

Proof of theorem 6.111:$f \rightarrow g$.

Definition 7.27: $f \to \mathrm{GR}\, f$.

Proof of theorem 7.30: 1. Added missing "GR". 2. $\sqcap \to \cap$.

Proof of theorem 7.35: $f \to \mathrm{GR}\, f$.

7.5 Categories of reloids: $(f; \mathcal{A}; \mathcal{B}) \to (\mathcal{A}; \mathcal{B}; f)$.

7.6 Monovalued and injective reloids: funcoid → reloid.

Definition 7.41: $A \to B$.

Theorems 6.102, 7.43: Removed $\exists \alpha \in \mathrm{Src}\, f$:.

Proof of theorem 7.48, proof of theorem 7.50, proof of theorem 7.56, proof of theorem 7.57: More specialized: theorem 4.116 → proposition 4.189.

Proof of theorem 7.58: $f \to F$.

Lemma 8.4 and its proof: $\mathrm{Dst}\, f \to V$.

Theorem 8.6: Added GR.

Proof of theorem 8.9: 1. $\mathcal{A} \times^{\mathsf{RLD}} \mathcal{B} \to (\mathsf{FCD})(\mathcal{A} \times^{\mathsf{RLD}} \mathcal{B})$ Removed $\forall$.

Proof of proposition 8.10: i → is.

Proof of theorem 8.17: 1. $\bigsqcup \to \bigcup$. 2. Proof clarified.

Proof of theorem 8.18: $A \to X$.

Conjecture 8.27: $a \to \mathcal{A}$, $b \to \mathcal{B}$.

9.1.1 Pretopology: The section completely rewritten (and much shortened), multiple errors corrected.

9.1.2 Proximity spaces: $\langle - \rangle \to \langle - \rangle^*$ in several places.

9.1.3 Uniform spaces: $\nu \to \mu$ several times.

9.2: $f^{-1} \to f^\dagger$.

Threom 9.5: Added "of a partially ordered dagger precategory".

Proof of theorem 9.7: $I_A \to f|_A$.

Proposition 10.25: $X \cup Y \to X \cup Y = A$.

Theorem 10.12: relation → binary relation.

Proof of proposition 10.20: More specific: theorem 4.111 → proposition 4.185.

Proof of proposition 11.5: Removed "up".

Lemma 11.7: filter → filters.

Proposition 11.24 and its proof: $\mathcal{A} \to \mathcal{B}$.

Theorem 11.35: isomorphism → being isomorphic.

Proof of theorem 11.41: $\mathrm{dom}\, f \to 1^{\mathfrak{F}(\mathrm{Base}(\mathcal{A}))}$.

Proof of theorem 11.45: $\mathrm{up}\, \mathcal{B} \to \mathcal{B}$.

Proof of proposition 11.46: $\subseteq \to \sqsubseteq$.

Proof of proposition 11.47: Several errors.

Proof of theorem 11.58: 1. $(F; \mathrm{Base}(a); \mathrm{Base}(a)) \to F$. 2. $\mathrm{up}\, a \to a$. 3. $\supseteq \to \sqsupseteq$.

11.3 Rudin-Keisler equivalence and Rudin-Keisler order: two examples → example.

Lemma 11.62 and its proof: $\uparrow^{\mathsf{FCD}(\operatorname{Dst} f_0;\operatorname{Dst} f_1)} f \to \uparrow^{\mathsf{FCD}(\operatorname{Src} f_0\times\operatorname{Src} f_1;\operatorname{Dst} f_0\times\operatorname{Dst} f_1)} f$; $\uparrow^{\operatorname{Src} f_0\times\operatorname{Src} f_1} \to \uparrow^{\operatorname{Dst} f_0\times\operatorname{Dst} f_1}$.

Proof of lemma 11.63: Moved below, proof completely rewritten. Strenghtened: ultrafilters $\to$ filters.

Theorem 11.76 and its proof: reloid $\to$ graph of reloid.

Proof of theorem 11.77: Added GR.

Proof of theorem 11.78: Wording and formulas corrected.

Proof of theorem 11.87: Wording corrected.

Proof of example 11.84: $\langle f\rangle \to \langle\uparrow^{\mathsf{FCD}} f\rangle$, $\langle g\rangle \to \langle\uparrow^{\mathsf{FCD}} g\rangle$. 2. $\uparrow^{\mathbb{Z}\times\mathbb{N}} X\cap\mathcal{A}=\emptyset \to \uparrow^{\mathbb{Z}\times\mathbb{N}} X\sqcap\mathcal{A}=0^{\mathbb{Z}\times\mathbb{N}}$.

Example 12.2: Added $\uparrow^{\mathbb{R}}$.

Proof of example 12.3: $\mathbb{R} \to 1^{\mathfrak{F}(\mathbb{R})}$

Proposition 12.8 and its proof: Strenghtened: $\mathbb{N}$ replaced with an arbitrary infinite set.

Proof of proposition 12.19: 1. $(\{x\}\times\mathbb{N})\cap\omega=\emptyset \to \uparrow^{\mathbb{N}\times\mathbb{N}}(\{x\}\times\mathbb{N})\sqcap\omega=0^{\mathfrak{F}(\mathbb{N}\times\mathbb{N})}$; 2. $\sqsubseteq \to \sqsupseteq$.

Proof of example 12.26: $K = (\geqslant)|_{\mathbb{R}\times\mathbb{R}} \to K = (\leqslant)|_{\mathbb{R}\times\mathbb{R}}$; 2. $\uparrow^{\mathsf{FCD}(\operatorname{Base}(\mathcal{A});\operatorname{Base}(\mathcal{B}))} \to \uparrow^{\mathsf{FCD}(\operatorname{Base}(\mathcal{A});\operatorname{Base}(\mathcal{B}))} K$.

Proof of example 12.30: Refered to an other example.

Proof of proposition 13.14: $\mathfrak{A} \to \operatorname{Dst} f$.

Proof of theorem 13.15: $\mathfrak{A} \to \operatorname{Dst} f$.

Proof of proposition 12.23: up $\to$ $\operatorname{up}^{(\operatorname{Dst} f;\mathfrak{Z})}$.

Theorem 13.25: Added "which is a meet-semilattice and $\forall x\in\operatorname{Src} f\colon \operatorname{up}^{(\operatorname{Src} f;\mathfrak{Z}_0)} x\neq\emptyset$".

Proof of theorem 13.25: 1. proposition 4.96 $\to$ theorem 4.44; 2. Added "because $\operatorname{Dst} f$ is separable by obvious 4.134".

Proof of theorem 13.26: $\emptyset \to 0^{\mathfrak{B}}$.

Theorem 13.27: "element" removed.

Proof of theorem 13.27: Added "because $\operatorname{Dst} f$ is separable by obvious 4.134".

Proof of theorem 13.27: 1. Added "up $x\neq\emptyset$ is obvious". 2. Added "First the meets $\bigsqcap^{\operatorname{Src} f} S$ and $\bigsqcap^{\operatorname{Dst} f}\langle\langle f\rangle\rangle S$ exist by corollary 4.105". 3. Added "(because $\operatorname{Dst} f$ is a separable poset)".

Proof of theorem 13.31: 1. Added "$\mathsf{FCD}(\mathfrak{A};\mathfrak{B})$ is a poset because $\mathfrak{A}$ and $\mathfrak{B}$ are separable." 2. $\cup \to \sqcup$, $\supseteq \to \sqsupseteq$, $\bigcup^{\mathfrak{B}} \to \bigsqcup$.

Proof of proposition 13.32: Added "and corollary 13.24".

Theorem 13.33: Added "separable".

Proof of theorem 13.33: 1. Added "$\mathsf{FCD}(\mathfrak{A};\mathfrak{B})$ is a poset because $\mathfrak{A}$ and $\mathfrak{B}$ are separable."

Theorem 13.37: Added "separable".

Proof of theorem 13.37: Added "(using separability of $\operatorname{Dst} f$)".

Theorem 13.38: Added "and separable", "posets" $\to$ "separable starrish join-semilattice".

Proof of theorem 13.38: 1. Added "We can apply theorem 13.33". 2. Added "Thus $f\circ(g\sqcup h) = f\circ g\sqcup f\circ h$ by theorem 13.30".

Obvious 13.42, 13.33: $\mathcal{A} \to a$.

13.6 Domain and range of a pointfree funcoid: The definition and properties of funcoid image (and domain) are rewritten.

13.7 Category of pointfree funcoids: $I_{\mathcal{A}}^{\mathsf{FCD}(\mathfrak{A})} \to \mathrm{id}_{\mathcal{A}}^{\mathsf{FCD}(\mathfrak{A})}$

Theorem 13.59 and its proof: 1. $\subseteq \to \sqsubseteq$; 2. up $\to$ $\mathrm{up}^{(\mathfrak{A};\mathfrak{Z}_0)}$.

Proof of proposition 13.64: More detailed proof.

Proof of proposition 13.65: $\subseteq \to \sqsubseteq$.

Proposition 13.72: meet-semilattice $\to$ meet-semilattice with least element.

Proof of theorem 13.73: Corrected wrong theorem reference.

Proof of theorem 13.75: $\mathfrak{B} \to \mathsf{FCD}(\mathfrak{A};\mathfrak{B})$.

Proposition 13.79: $\sqcup \to \cup$.

Proof of proposition 13.80: $\cup \to \sqcup$.

Theorem 13.88: $\langle f\rangle^{\mathfrak{Z}_0} S \to \langle f\rangle \bigsqcup^{\mathfrak{Z}_0} S$.

Proof of theorem 13.88: Replaced a wrong formula reference with a true formula.

Theorem 13.89: Added "atomic".

Theorem 13.89 and its proof: Removed superfluous conditions.

Proposition 13.91: Removed unnecessary condition "and $\mathfrak{Z}_0$ is a complete boolean lattice".

Definition 13.92: Added "atomistic".

Obvuous 13.95: Turned into a proposition and added a proof.

Obvious 13.98: Removed as wrong in the case if our posets are not meet-semilattices.

Thereom 13.98: Added "with least element"; added that $\mathfrak{B}$ is atomic.

Proof of thereom 13.98: 1. $\cap^{\mathfrak{A}} \to \sqcap^{\mathfrak{A}}$; 2. added more explicit proposition references; 3. $0 \to 0^{\mathfrak{B}}$.

Theorem 13.99: $\sqcap \to \sqcap^{\mathfrak{Z}_0}$.

Proof of theorem 13.99: rewritten.

Theorem 13.99: $\mathfrak{Z}_0 \to \mathfrak{Z}_1$.

13.14 Elements closed regarding a pointfree funcoid: Removed superfluous "with least element".

Proof of theorem 13.101: 1. $\subseteq \to \sqsubseteq$; 2. Added "(used separability of $\mathfrak{A}$)".

Proposition 13.104: Added "with join-closed core".

14.2 Limit: $\{a\} \to \uparrow^{\mathrm{Src}\,\mu}\{a\}$; $\langle f\rangle \to \langle f\rangle^*$; $\cap \to \sqcap$; $0^{\mathrm{Dst}\,f} \to 0^{\mathfrak{F}(\mathrm{Dst}\,f)}$.

14.3 Generalized limit: "group of permutations of" $\to$ "permutation group on".

14.3.1 : $\langle\mu\rangle^*\{x\} \to \langle\mu\rangle^*\{x\}$. "We will assume that the funcoid f is defined on $\langle\mu\rangle^*\{x\}$." $\to$ "We will assume that the $\operatorname{dom} f \sqsupseteq \langle\mu\rangle^*\{x\}$."

Proof of proposition 14.11: $\sqsubseteq \to \sqsupseteq$.

Proof of proposition 14.20: Removed "where $x' \in D$".

Proof of proposition 14.21: More detailed proof; $\langle\nu\rangle\langle f\rangle\langle\mu\rangle^*\{x\} \to \langle\nu\rangle\langle f\rangle\{x\}$.

Proof of theorem 14.23: $\sqsupseteq \to =$.

Corollary 14.24: $\langle\mu\rangle\{x\} \to \langle\mu\rangle^*\{x\}$.

bijective $\to$ injective.

Lemma 15.3: Added poset $\mathfrak{C}$.

Theorem 15.8: $()^\dagger \to ()^{-1}$.

Theorem 15.9: "morphisms of a quasi-invertible category where $\operatorname{Dst} f$ and $\operatorname{Dst} g$ are filters on boolean lattices" $\to$ "pointfree funcoids between filters on boolean lattices".

Proof of theorem 15.9: 1. Added reference to theorem 13.73; 2. replaced a wrong theorem reference.

Proposition 15.10 $\to$ corollary 15.10: Added "$\operatorname{Src} f$, $\operatorname{Dst} f$, $\operatorname{Src} g$, $\operatorname{Dst} g$ are boolean lattices".

Proposition 15.20. Strenghtened: lattice $\to$ poset.

Proof of proposition 15.24: $\bigsqcup \operatorname{atoms} x_i \to \lambda i \in \operatorname{dom} x: \bigsqcup \operatorname{atoms} x_i$.

Added corollary 15.21, which I previously refered to without proof.

Corollary 15.25: Strenghtened: "atomistic complete lattices" $\to$ "atomistic poseets with least elements".

Proof of proposition 15.26: $\subseteq \to \sqsubseteq$.

Proof of proposition 15.28: 1. "finitely join-closed" $\to$ "join-closed"; 2. $\sqcap^{\mathfrak{Z}_i} \to \sqcup^{\mathfrak{Z}_i}$; 3. said that joins exist. 4. Added reference to a necessary statement which was missing previously; $\lambda \in n \to \lambda i \in n$.

Proposition 15.33: Added a missing theorem condition. Now a proposition with a proof.

Proposition 15.34: Seriously rewritten.

Proposition 15.35: Added "with $\operatorname{up} x \neq \emptyset$ for every $x \in \mathfrak{A}_i$ (for every $i \in n$)".

Proof of proposition 15.40: $\prod \to \bigsqcup$.

Proposition 15.41 and its corollary: $n \to \operatorname{dom} \mathfrak{A}$.

Proof of proposition 15.41: $\mathfrak{A} \to \prod \mathfrak{A}$.

Corollary 15.42: least $\to$ greatest.

Definition 15.54: a poset relation $\to$ anchored relation between posets.

Lemma 15.55: completary staroid $\to$ graph of completary staroid. Also the proof is corrected.

Proposition 15.56: $f \to \operatorname{GR} f$.

Proposition 15.57: A $\to$ Every.

Proof of proposition 15.57: The old proof was valid only for a special case.

Proof of proposition 15.64: 1. $\operatorname{up} L \to L$. 2. $\mathscr{P}\mathfrak{Z} \to \mathfrak{Z}$.

Proposition 15.65 and its proof: 1.$(\operatorname{val} \downdownarrows f))_i \to (\operatorname{val} \downdownarrows f)_i$; 2. $(\operatorname{form} f)_i \to \mathfrak{Z}_i$.

The section "Displacement" moved after the definition of cross-composition product.

Definition 15.70: is $\to$ be.

Theorem 15.74: 1. Theorem conditions exchanged; $L \in \prod \mathfrak{A} \to L \in \prod \mathfrak{A}|_{\operatorname{dom} \mathfrak{A} \setminus \{i\}}$; 2. added "of the form $\lambda i \in \operatorname{dom} \mathfrak{A}: \mathfrak{F}(\mathfrak{A}_i)$".

Proof of theorem 15.74: 1. Added "(taking into account that $\mathfrak{A}_i$ is a boolean lattice)"; 2. Removed $=K=$.

Definition 15.72: Added a new definition (Λ).

Theorem 15.75: Theorem condition rewritten.

Remark 15.79: posets $\to$ pre-multifuncoid sketches.

Theorem 15.80: Strenghtened: distributive lattices $\to$ starrish join-semilattices.

Theorem 15.84: Strenghtened: distributive lattices $\to$ starrish join-semilattices.

Proof of theorem 15.84: Rewritten.

Theorem 15.85: $f \to F$.

Proof of theorem 15.85: 1. $B \in [f] \vee B \in [g] \to B \in [f]$ for some $f \in F$. 2. Removed "$(f \sqcup g)B|_{(\operatorname{dom}\mathfrak{A})\setminus\{k\}}$"; 3. other corrections.

Definition 15.89: $\mathrm{GR}\left(\prod^{\mathsf{FCD}(\mathfrak{A})} A\right)_k L \to \left\langle \prod^{\mathsf{FCD}(\mathfrak{A})} A\right\rangle_k L$ (also in a proofs below).

Proof of proposition 15.90: 1. $L \to L|_{(\operatorname{dom}\mathfrak{A})\setminus\{k\}}$; 2. $A_k \to L_k$.

Proof of theorem 15.92: Several corrections.

Proof of theorem 15.94: $\subseteq \to \sqsubseteq$.

Conjecture 15.95: Was a theorem, but the proof was wrong. So now it is a conjecture.

Proof of theorem 15.99: a little shortened.

Remark 15.100: Removed.

Proposition 15.103: 1. a repeated two times formula removed; 2. $(\operatorname{val} F_j) \to (\operatorname{val} F_i)_j$; 3. added missing K after $(\operatorname{val} F_i)_j$; 4. $A \to B$; 4. $n \to \mathsf{arity} \prod^{(D)} F \colon L_{c(i)} i$; 5. a little more detailed proof.

Proposition 5.108 and its proof: Errors corrected.

Definition 15.115: quasi-invertible pre-category with star-morphisms $\to$ category with star-morphisms.

Definition 15.117: category $\to$ pre-category.

Proof of correctness of definition 15.117: More detailed proof.

Proof of proposition 15.121: Rewritten (errors corrected).

Removed some stuff about abrupt categories, because abrupt categories were considered quasi-invertible in error (dagger for a star-morphisms was not defined but used).

15.9.2 General cross-composition: quasi-invertible category $\to$ quasi-invertible category with star-morphisms.

Proof of thereom 15.124: Added "The rest follows from symmetry."

Corollary 15.125: Errors in the proof corrected.

15.9.3 Displacement: Moved below (now with errors).

Definition 15.160: The definition of discrete multireloid.

Added section 15.3.1 "Discrete staroids".

"Displacement" subsection removed due errors which were not easy to correct.