Corollary 4 *Connectedness generated by an extendable connector space is a c-structure in the sense of [4].*

Remark 5 Connectedness generated by an extendable connector space is not necessarily a connective structure in the sense of [4]. A counter-example is proximal connectedness on the set $\mathbb{R} \setminus \{0\}$. (Take $A = (-\infty; 0)$, $B = (0; +\infty)$ to violate the axiom (iii) in the main definition of [4].)

5.3. Links generated by a connector

Definition 18 $a\ \rho(E)\ b \Leftrightarrow \exists K \in E : a, b \in K$ *for every collection* E *of sets.*

Definition 19 $L(E)_A = \rho(\mathscr{P}A \cap E)$ *for every collection* E *of sets and a set* A*.*

Let $(U; r)$ is a connector space.

Definition 20 $\zeta_{(U;r)}(\star)$ *is the link space defined by the formula* $\zeta_{(U;r)}(\star)_A = (U; \star_{(U;r)|_A})$.

Definition 21 *Let* $(\equiv_{(U;r)}) = \rho(\mathrm{CC}(U; r))$.

Proposition 12 $\zeta_{(U;r)}(\equiv)_K = (\equiv_{(U;r)|_K}) = L(\mathrm{CC}(U; r))_K = \rho(\mathrm{CC}((U; r)|_K))$ *for every connector space* $(U; r)$ *and set* $K \in \mathscr{P}U$*.*

Proof $(\equiv_{(U;r)|_K}) = \rho(\mathrm{CC}((U; r)|_K)) = \rho(\mathrm{CC}(U; r) \cap \mathscr{P}K) = L(\mathrm{CC}(U; r))_K$.

$\zeta_{(U;r)}(\equiv)_K = (\equiv_{(U;r)|_K})$ by definition. □

Obvious 14 $\zeta_{(U;r)}(\equiv)$ *is an increasing link space.*

Obvious 15 $(\equiv_{(U;r)})$ *is symmetric for every connector space* $(U; r)$*.*

Proposition 13 $(\equiv_{(U;r)})$ *is reflexive on* U *for every connector space* $(U; r)$*.*

Proof Follows from the fact that singletons are connected. □

Theorem 9 $(\equiv_{(U;r)})$ *is an equivalence relation on* U *for every extendable connector space* $(U; r)$*.*

Proof We need to prove only transitivity. Let $a \equiv_{(U;r)} b$ and $b \equiv_{(U;r)} c$. Then exist $X, Y \in \mathrm{CC}(U; r)$ such that $a, b \in X$ and $b, c \in Y$. Because $X \cap Y \neq \emptyset$ we have $X \cup Y \in \mathrm{CC}(U; r)$. So $a \equiv_{(U;r)} c$. □

Definition 22 *A* ***connected component*** *(regarding a connectedness space* $(U; r)$*) is a non-empty maximal connected set.*

Proposition 14 *A set* $A \in \mathscr{P}U$ *is connected regarding a connector space* $(U; r)$ *iff there are exactly one connected component of the connector space* $(U; r)|_A$*.*