Proposition 5.2 If $\mathbb{A}$ = (LA, HA), and $\mathbb{B}$= (LB, HB) are two RIFSs on U and are independent to each other then, ~$\mathbb{A}$ and ~$\mathbb{B}$ are independent.

Proof: From hypothesis $\mathbb{A} \not\Rightarrow \mathbb{B}$ and $\mathbb{B} \not\Rightarrow \mathbb{A}$

That is $LB \not\subset LA \text{ and } LA \not\subset LB$

Hence $\sim LA \not\subset \sim LB \text{ and } \sim LB \not\subset \sim LA.$ in similar way we can get $\sim HA \not\subset \sim HB \text{ and } \sim HB \not\subset \sim HA$

That is ~$\mathbb{A}$ ⇒ ~$\mathbb{B}$ and ~$\mathbb{B}$⇒~$\mathbb{A}$ is not true.

Hence the proposition.

Example: Let $\mathbb{A}$ = (LA, HA) and $\mathbb{B}$ = (LB, HB) be two RIFS on U. Let U = {u,v,w,x} be the universe;
LA = { <u,.5,.5>,<v,.6,.2>,<w,.7, .3>, <x, .7,.2 >}
HA = {<u, .6, .3>, <v, .8, .2 >, <w, .7, .2>, <x, .8,.1>}
and
LB = {<u, .7, .2>, <v, .7, .1>, <w, .8, .2>, <x, .7, .2>}
HB = {<u, .8, .1>, <v, .7, .1>,<w, .9, .1>, <x, .8, .2>}

Clearly LA ⊆LB, that is $\mathbb{A} \subset_* \mathbb{B}$. Then

H ~A = ~LA = {<u, .5, .5 >, <v, .4, .8 >, <w, .3, .7 >, <x, .3,.8>} = {<u, .5, .5 >, <x, .3, .7 >}
Since $\mu_{\sim LA}$(v) + $\nu_{\sim LA}$(v) = .4 + .8 > 1, the element v is not included in ~LA.
Also H~B=~LB = {<u, .3, .8 >, <v, .3, .9 >, <w, .2, .8 >, <x, .3, .8 >} = {<w, .2, .8 >}

Hence H ~ A ⊃ H~B; that is, ~ $\mathbb{A} \subset^* \sim\mathbb{B}$.

6. Conclusion:

The constructive approach is more suitable for practical applications of rough sets, while the algebraic or axiomatic approach to rough set is appropriate for studying the structure of rough set algebra. The axiomatic approach deals with axioms that must be situated by approximation operators without explicitly referring to a binary relation. Here we define dependency of knowledge through axiomatic approach and some properties are studied and at the end a new notion called rough intuitionistic fuzzy set is defied through axiomatic approach.

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