

APPENDIX A. EXPERIMENTAL RESULTS

Table 3. Experimental results of five sample why-not questions

SPARQL queries	Why-not questions	Explanations
<p>Query: To find American actors who have won the Academy Award for Best Actor.</p> <pre>Q={ SELECT ?actorname WHERE { ?actor name ?actorname. ?actor type actor. ?actor country ?country. ?actor haswon "Academy Award for Best Actor". FILTER regex(?country, "United States") } }</pre>	<p>Why does <i>Leonardo DiCaprio</i> not show up? (?actorname→ "Leonardo DiCaprio")</p>	<p>A modified why-not BGP:</p> <pre>{ ?actor name "Leonardo DiCaprio". ?actor type actor. ?actor country ?country. ?actor haswon "Film awards for lead actor". }</pre> <p>(Academy Award for Best Actor is modified to Film awards for lead actor. Leonardo DiCaprio has never won the Academy Award for Best Actor)</p>
	<p>Why does <i>Colin Firth</i> not show up? (?actorname→ "Colin Firth")</p>	<p>Operator: <i>FILTER</i> filtered out :</p> <pre>{ Colin Firth country United Kingdom. Colin Firth name "Colin Firth" }</pre>
<p>Query: To find romantic disaster films were released after 2000.</p> <pre>Q={ SELECT ?filmname WHERE { ?film name ?filmname. ?film type Romantic films. ?film type Disaster films. MINUS { ?film released ?date. FILTER(?date < "2000") } } }</pre>	<p>Why does <i>The English Patient</i> not show up? (?filmname→ "The English Patient")</p>	<p>A modified why-not BGP:</p> <pre>{ ?film name "The English Patient". ?film type Romantic films. ?film type War films. ?film released ?date. }</pre> <p>(Triple pattern ?film type Disaster films is modified to ?film type war films. The English Patient is a romantic war film)</p>
	<p>Why does <i>Titanic</i> not show up? (?filmname→ "Titanic")</p>	<p>Operator: <i>MINUS</i> filtered out :</p> <pre>{ Titanic released 1997. Titanic name "Titanic" }</pre>
<p>Query: To find the female directors who directed and acted in the same film, and the film won the Academy Award for Best Picture.</p> <pre>Q={ SELECT ?directorname WHERE { ?director directed ?film. ?director actedin ?film. ?director name ?film. ?director gender female. ?film haswon Academy Award for Best Picture. } }</pre>	<p>The result is an empty set. Why? (?directorname→∅)</p>	<p>A modified why-not BGP:</p> <pre>{ ?director directed ?film. ?director actedin ?film. ?director name ?film. ?director gender ?arbitrary. ?film haswon Academy Award for Best Picture. }</pre> <p>(Female is modified to a variable, several directors will show up but they are all males)</p>