CS674, Spring 2002
Lecture Handout, 3/27/02

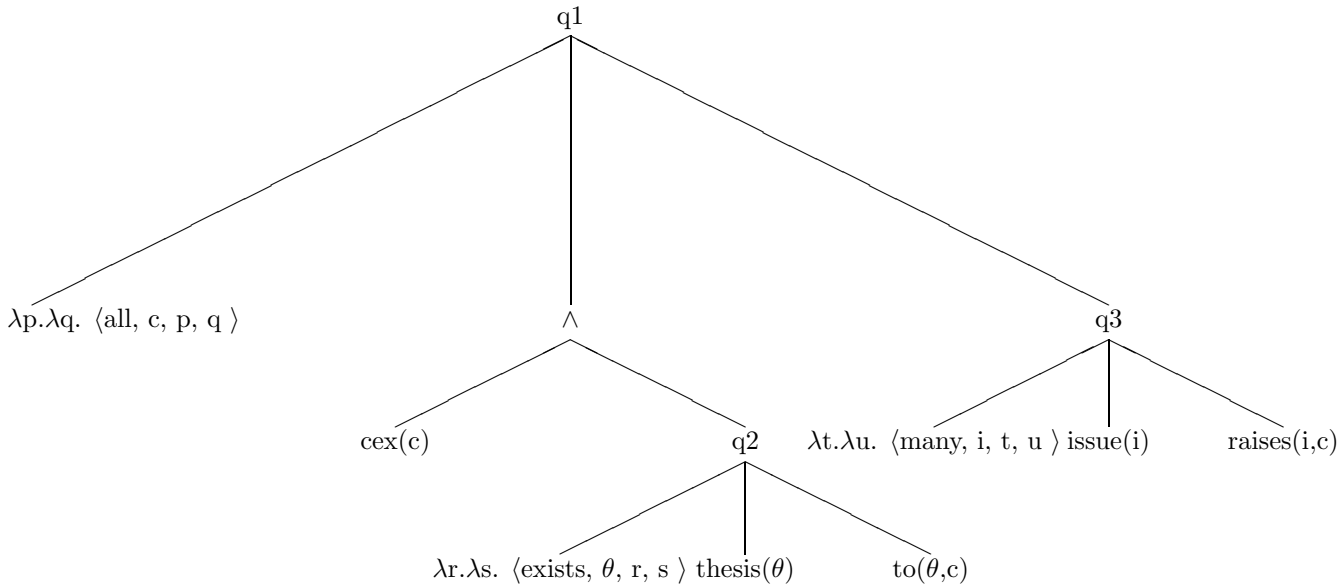
I opened the door accordingly and went in, and there was Moore seated by the fire with a basket upon his knees. "Moore", I said, "do you have any apples in that basket?" "No", he replied, and smiled seraphically, as was his wont. I decided to try a different logical tack. "Moore", I said, "do you then have some apples in that basket?" "No", he replied, leaving me in a logical cleft stick from which I had but one way out. "Moore", I said, "do you then have apples in that basket?" "Yes", he replied. And from that day forth, we remained the very closest of friends. — "Bertrand Russell" (*Beyond the Fringe*)

1. Generating quantifier scopings.

1**(a)** Every counterexample to a thesis raises some issues.

1**(b)** ⟨all, c, cex(c) ∧ ⟨exists, θ, thesis(θ), to(θ,c) ⟩, ⟨many, i, issue(i), raise(i,c) ⟩ ⟩

1**(c)** ⟨many, i, issues(i), ⟨all, c, cex(c) ∧ ⟨exists, θ, thesis(θ), to(θ,c) ⟩, raise(i,c) ⟩ ⟩

1**(d)** ⟨exists, θ, thesis(θ), ⟨all, c, cex(c) ∧ to(θ,c), ⟨many, i, issue(i), raise(i,c) ⟩ ⟩ ⟩

1**(e)**