Mathematics 1550H – Introduction to probability
TRENT UNIVERSITY, Summer 2013

Assignment #2
Boxed in … *
Due on Wednesday, 10 July, 2013.

The Wizard of Oz shows you three closed boxes, and tells you that two of them are empty and the remaining one contains the magical red shoes you need (and want!) to return home from Oz. You are allowed to choose one box and proceed to do so. The Wizard opens one of the other two boxes (*i.e.* not the one you picked), which turns out to be empty, and asks you if you wish to change your mind about which box to pick.

1. Should you stick with your original choice or change it to the other unopened box? Explain your reasoning fully. *[10]*

Just to fill in some blank space:

Sing me a song of the hydrogen light
Three degrees Kelvin illumine the night
Three degrees Kelvin, the infrared sky
Colors too deep for the unaided eye

Sing me a song of the hydrogen band
Whispering low since the cosmos began
Whispering low as the white light shifts red
Wavefronts of hydrogen sweeping ahead

Sing me a song of the hydrogen wall
Vector me out to that light bounding all
Vector me out in that glory to dwell
End of the universe, cosmic eggshell.

By John M. Ford, from his novel *Princes of the Air.*

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*   With apologies to L. Frank Baum.