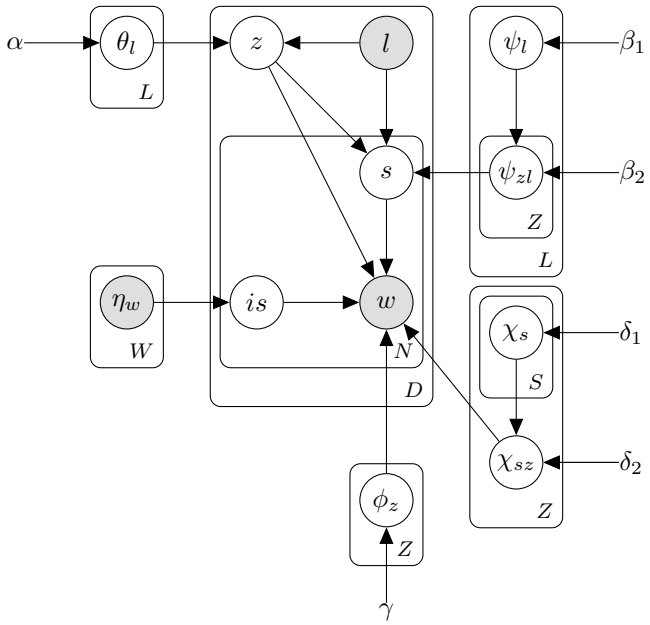
α
θ_l
L
z
l
s
ψ_l
β_1
ψ_{zl}
β_2
Z
L
η_w
W
is
w
N
D
χ_s
δ_1
S
χ_{sz}
δ_2
Z
ϕ_z
Z
γ

Observed Variables and Distributions	
w	Word in a tweet
l	Label of a tweet (literal positive, literal negative, sarcastic)
Distributions	
η_w	Distribution over switch values given a word w
Latent Variables and Distributions	
z	Topic of a tweet
s	Sentiment of a word in a tweet; takes values: literal positive, literal negative
is	Switch variable indicating whether a word is a topic word or a sentiment word
Distributions	
θ_l	Distribution over topics given a label l
ϕ_z	Distribution over words given a topic z and switch =0 (topic word)
χ_s	Distribution over words given sentiment s and switch=1 (sentiment word)
χ_{sz}	Distribution over words given a sentiment s and topic z and switch=1 (sentiment word)
ψ_l	Distribution over sentiment given a label l and switch =1 (sentiment word)
$\psi_z l$	Distribution over sentiment given a label l and topic z and switch =1 (sentiment word)

Table 1: Glossary of Variables/Distributions used