

**PSC/IR 265: Civil War and International Systems**

**Final**

**Name:** \_\_\_\_\_

**This exam contains five short answer questions.**

**Each is worth 20 points.**

**All questions are mandatory.**

*Legible writing: ? 🗑️ ① ✦ ✦ ✓ 🗑️ ① ✕ 🗑️ 🗑️ 🗑️.*

Question 1: Suppose G(overnment) is deciding whether to challenge T(hird party intervener). G calculates that restarting a war is only worth it if T will back down at least 40% of the time.

There are three possible types of T: an *unresolved* type that values peace worth \$1 billion, a *middling* type that values peace worth \$3 billion, and a *resolved* type that values peace at \$10 billion. Intervention will certainly be successful but costs \$5 billion regardless of T's type.

a) Suppose G knew that T was unresolved. Would G challenge T? Why or why not?

b) Suppose G knew that T was middling. Would G challenge T? Why or why not?

c) Suppose G knew that T was resolved. Would G challenge T? Why or why not?

For the remaining questions, suppose G is uncertain of T's type but thinks that each is equally likely (i.e., it believes T is unresolved with probability  $1/3$ , middling with probability  $1/3$ , and resolved with probability  $1/3$ . T, of course, knows its type.

d) Suppose G observes a costly signal of \$1,000,000,001. Is this an unambiguous signal that T is the resolved type? Explain your answer.

e) Should G challenge after observing this signal? Explain your answer.

Question 2: Groups that resort to terrorist attacks are less likely to receive concessions than groups that do not. Is this sufficient to conclude that separatist groups should not resort to terrorist attacks if they wish to improve their bargaining position against a government? If yes, explain why this inference follows from this observation. If not, explain why this observation could lead to the wrong conclusion and describe the data you would need to make that inference.

Question 3: Recall the standard bargaining model of war. R and G are bargaining over a good worth 1. If they fight a war, R wins with probability  $p_R$  while G wins with probability  $1 - p_R$ . Regardless of the outcome, the parties pay respective costs  $c_R, c_G > 0$ .

Ordinarily, we assume that the winner takes the whole bargaining good. (The loser normally receives nothing.) Maintain this assumption about G. However, suppose that R has *limited* war aims. In particular, if it wins a war, it will only take half of the good, perhaps because it is a separatist group and does not want to pay the costs of administering the entire country. G knows that R has these limited war aims.

a) Write each side's expected value for war.

b) Let  $x$  be R's share of a negotiated settlement, with  $1 - x$  going to G. Prove the existence of mutually preferable peaceful settlements.

Question 4: Actors can often improve their outside options by maneuvering militarily or investing in power. Explain why bargaining normally renders incurring such costs unnecessary. Then explain why information problems can cause bargaining to fail in the context of United Nations Security Council resolutions and why commitment problems can cause bargaining to fail in the context of nuclear proliferation.

Question 5: How does rough terrain affect the expense of counterinsurgency campaigns? Given that insurgencies begin as the result of bargaining failure, what does this say about our theoretical expectation of rough terrain's effect on the outbreak of war in the context of the risk-return tradeoff? What about the length of war conditional on its initiation?