Frequently Asked Questions about our Letter by Concerned Economists Regarding "Contracting for Sex in the Pacific War" (CSPW) in the *International Review of Fconomics*

What is game theory?

The heart of economic theory is the idea that in many situations, people take actions because they choose to do so. What a person chooses of course depends on their preferences and the incentives they face. Game theory, used in economics and several other fields, specializes in understanding how a person's choices can depend on the actions of others, for example if I choose to go to a party because I observe you going.

What is contract theory?

Contract theory is a part of economic theory that uses game theory to explain the wide variety of contractual relationships that we observe in society, for example whether you pay a business advisor a flat fee or a percent of the profits.

What is law and economics?

Law and economics uses tools and ideas from economics to understand aspects of our legal system, such as property rights and the incentive effects of legal penalties. Since contracts are in fact legal documents, ideas from contract theory can be very helpful in law and economics.

What is the "commitment problem"?

For example, say you ask a body shop to paint your car. You negotiate a fee, but when do you pay it? If you pay the entire fee before work begins, then the body shop can take your money and do nothing. If you pay the fee after your car is painted, then the body shop would worry that after they do all the work, you will drive off without paying. This is sometimes called the "commitment problem," and one way to reduce it is for you to pay half of the fee up front, and half after the car is painted, thus reducing the possible loss for everyone, and making a successful deal possible.

How are game theory, contract theory, and law and economics related?

In the body shop example, we can explain why a contract (half up front, half after finishing) is commonly used by understanding how the people involved (you and the body shop) will act given the circumstances (if you pay the whole fee up front, the body shop has reason to not do the work, and you will anticipate that). If the legal system allows the body shop to hold on to your car if you don't pay up, then the body shop might be fine with you paying the entire amount after the work is done.

Does game theory or contract theory depend on the particular real-world or historical context?

The argument in the body shop example for paying half of the fee up front, and half after the car is painted is context-free in that it does not depend in what country or decade you and the body shop are in, and whether it is a body shop or a house painter or a dentist. Game theory, contract theory, and economic theory in general are dedicated to the idea that it can be helpful to understand human behavior by abstracting away from a particular human context. Hence they rely often on thought experiments and mathematical models.

Is it possible to make a purely theoretical contribution to economics, game theory, or law and economics and does CSPW make such an argument?

A particular argument might be considered a contribution to economics, game theory, or law and economics even if it is purely abstract and does not attempt to immediately explain any observed human behavior. Examples include developing mathematical tools and concepts (such as "Nash equilibrium," developed by John Nash in 1951). Whether an argument of this kind is considered a contribution would depend on criteria such as its novelty, its usefulness in a broad variety of situations, whether it provides new explanations for existing phenomena, or allows us to explain phenomena not yet examined. CSPW does not make this kind of argument.

What is CSPW's argument, expressed in an abstract context?

CSPW advances an argument, which abstracted away from any particular historical context, is the following. Say an employer wants to hire an employee, but the employee will experience large costs from even starting the job. Hence the employer offers a large fee up front, in the form of a loan, offers a wage for work after the employee has started, and then holds the worker responsible until the worker has paid back the loan, but with a maximum term of service. This contract gives the employee confidence that the employee will be able to make a certain amount of money in a certain period of time, because it is offered up front, and gives the employer confidence that the worker will work hard because the worker has to pay back the loan to release the obligation.

Is CSPW's argument, expressed abstractly, a contribution to economics?

No. Any abstract argument can be criticized in terms of logical consistency and completeness, that is, even on its own terms. For example, don't we have to specify how much the employee cares about money now versus money in the future, and won't this affect whether the employee will accept the upfront fee given that the employee will have to pay it back later? Don't we have to specify what happens if the worker stops working and doesn't try to pay back the loan? Doesn't the incentive to work to pay back the loan conflict with the worker's incentive to "run out the clock" and reach the maximum term of service? Will an upfront fee give the worker confidence that the worker will make money if the fee is in the form of a loan which must be paid back? A failing business can still give loans. Is this the only kind of contract, or the best one, that would serve the stated purposes, for both people? Questions of logical consistency are why game theory and economics typically use mathematics to make these kinds of arguments.

Assessed in this manner, CSPW does not meet current disciplinary standards for being a contribution to economic theory or game theory. This is largely because it does not make its arguments in a way which is now considered standard and complete (for example, with an explicit mathematical model). It is possible to make abstract arguments without explicit

mathematical modeling, but of course logic still applies. The argument in CSPW is not nonsensical, but it does not use logical reasoning to derive its result, other than "this would seem to do the job." Indeed, the argument is little more than assertion. Also, regardless of whether the argument is made mathematically or not, the criterion of whether it is novel, interesting, or rises above common sense is also relevant. This is more of a judgment call, but it is hard to imagine a scholar currently active in economic theory or game theory who would consider it a contribution.

Can CSPW's argument be criticized in terms of its assumptions?

The argument can also be criticized outside its own terms, even abstractly, for example by saying that its assumptions are unrealistic or constraining. For example, won't the argument depend on whether or not the employee can get a loan from a third party, and then pay off the loan and then quit? Doesn't the argument depend on whether a legal system exists that could enforce the contract if either side breaks it?

Is CSPW attempting an applied argument?

CSPW attempts to make a contribution not by making an abstract, decontextualized argument, but rather by using a kind of reasoning from game theory to explain real-world human behavior. Whether the paper makes a contribution thus depends less on the thoroughness, quality, and novelty of the reasoning and more about whether it helps us understand real-world phenomena. Even commonsense reasoning can be very useful if applied in an interesting and novel way.

If this is the basis for assessment, then much more rides on whether its assumptions make sense in a real-world human context, for example, the assumption that a person does not experience violence if they do not accept. Arguing that a set of assumptions makes sense requires factual claims and evidence, and the quality of the argument depends on the quality of the factual claims and evidence, which scholars in any field, not only historians, should be able to understand.

Do the assumptions of an applied argument have to always be true for the argument to be helpful?

If an article claims to explain a general phenomenon, for example "debt slavery" or indentured servitude as it has appeared throughout different times and locations, then it is not necessarily problematic if not all of its assumptions make sense in every instance, as long as they are defensible and plausible for most. CSPW is not trying to explain a general phenomenon.

Does CSPW make a scholarly contribution?

No. CSPW claims something quite specific, that the interactions of people in what it calls "the wartime brothels called 'comfort stations'" that were created during World War II by the Japanese army can be explained using its argument. If this is the claim, then the specific historical facts are of central importance. However, CSPW's factual claims are inconsistent with established fact, as expressed by participants' direct accounts, United Nations investigators, many published studies, and the Japanese government itself. For example, in 1993, the Japanese government stated that "The Government study has revealed that in many cases they were recruited against their own will, through coaxing, coercion, etc., and that, at times,

administrative/military personnel directly took part in the recruitments. They lived in misery at comfort stations under a coercive atmosphere."

The Japanese government coercively moved these young women and girls to locations throughout Asia, far from their homes and during a war. In the <u>words</u> of UN Special Rapporteur Radhika Coomaraswamy, "The end of the war brought no relief to a large proportion of the 'comfort women' still in service, since many were killed by the retreating Japanese troops or, more often, simply abandoned to their fate. In Micronesia, in one case the Japanese army killed 70 'comfort women' in one night, because they felt the women would be an encumbrance or an embarrassment were they to be captured by the advancing American troops."

Given that many people, in the extremely specific situation that CSPW focuses on, experienced violence if they chose not to be recruited, or experienced violence while at the comfort stations themselves, were lied to about the kind of work they would be doing, and did not experience anything like an end of their term, or even if their term could somehow end, could not plausibly return to their previous lives, CSPW's assumption that the upfront payment upon starting, the incentive to pay back the loan, and the fixed term duration were important in a person's decision-making does not make sense and thus its argument is invalidated. One could make a very well-reasoned and novel argument for why the Ford Motor Company released the Model T in 1920, but if in fact the Model T was released in 1908, such an argument would make no contribution.