Dis 6: Contract Law (Cont'd) [†]

1 Payment timing

Question 2 from HW 5: Ned contracts with Rebecca to cropdust his field, agrees to pay Rebecca $3,000.

	Value to Ned if Rebecca cropdusts	Value to Ned if Rebecca doesn't
Ned plants corn	$33,000	$27,000
Ned plants wheat	$45,000	$15,000
Ned plants soybean	$50,000	$0

The question didn't specify **when** the payment of $3,000 is made to Rebecca, but different payment timing assumption affects Ned's payoff when performance is carried out and when it's not, by extension affects the calculation of expectation damages (ED).

To illustrate, consider the case when Ned chooses to plant corn:

- If we assume that payments are made **upfront**:

$$\text{Ned's payoff when Rebecca cropdusts} = \text{Ned's payoff when Rebecca doesn't cropdust} + \text{ED}_1$$
$$33000 - 3000 = 27000 - 3000 + \text{ED}_1$$
$$\text{ED}_1 = 6000$$

- If we assume that payments are made **only after Rebecca performs** (what we often see in class):

$$\text{Ned's payoff when Rebecca cropdusts} = \text{Ned's payoff when Rebecca doesn't cropdust} + \text{ED}_2$$
$$33000 - 3000 = 27000 + \text{ED}_2$$
$$\text{ED}_2 = 3000$$

Notice that ED_1 is exactly $3,000 more than ED_2. You can interpret this as you (the promisee) made the payment to the promisor upfront, so the promisor's liability should include this payment amount to pay you back when the promisor fails to perform.

On exams, the time of payment will be more clearly specified. But in case that future exam (or homework) left it ambiguous, make sure you **clearly state your assumption on when you assume the payment to promisor is made**.

[†]Adapted from Jonathan Becker's Fall 2018 handout

2 Review: More on designing an efficient contract law system

2.1 More on not enforcing inefficient contracts

- **Performance excuses**: A valid contract does exist, but circumstances have changed, and I should be allowed to not perform without penalty.

    – **Impossibility**: Circumstances made it impossible to perform the contract.
    – **Frustration of purpose**: A change in circumstance made the contract pointless.

    Efficiency requires assigning liability to the party that can bear the risk at least cost.

- **Bad information**: Contracts signed when one or both parties possess bad information.

    – **Fraud**: One party deliberately tricked the other.
      Efficiency requires voiding the contract.
    – **Failure to disclose**: One party failed to disclose important information to the other.

        * Note: Fraud vs. Failure to disclose
          Fraud means one party lied.
          Failure to disclose means one party didn't lie, but they withheld information.
        * Under civil law: Contracting parties have a **duty to disclose**
          ⇒ will void the contract
        * Under common law: Generally only safety risks need be disclosed. Exceptions include new products which come with an "implied warranty of fitness", and (some) large transactions where full disclosure is often necessary for efficient contract formation.
          ⇒ usually contracts are upheld, but damages will be imposed

    – **Mutual mistake**: Both parties made a mistake, without which a contract wouldn't have existed.
      Efficiency requires voiding such contracts; otherwise, we would be enforcing involuntary trade.
    – **Unilateral mistake**: Only one contracting party has mistaken information.
      Efficiency requires **"uniting knowledge and control"** (i.e. putting control in the hands of the party with the most efficient information), so contracts based on unilateral information are typically upheld.
      Cooter and Ulen went further to define what type of unilateral mistake is made to determine whether a contract is efficient to enforce:

        * Contracts based on one party's **productive info** (wealth-creating) should be enforced.
        * Contracts based on one party's **redistributive info** (wealth-shifting) shouldn't be enforced.

    – **Vague contract terms**: Contracts whose terms are overly ambiguous.
      Generally not enforced (from the perspective of penalty default & inefficient to figure out what the contracting parties meant when they drafted the contract).

- When one contracting party has too much contracting power:

    – **Adhesion**: Standardized "take-it-or-leave-it" contracts where terms are non-negotiable.
      Generally enforceable, but sometimes terms could be voided if such terms wouldn't be agreed to had they been noticed.
    – **Unconscionability / Lesion**: Overly one-sided contract.
      Generally not enforceable, since it creates situational monopolies, resulting in inefficiency.

2.2 Remedies for breaching contract

- **Party-designed remedies**: Damages specified in a contract for particular scenarios.
  - **Liquidated damages**: Damages that reasonably approximate actual harm done by breach. Typically efficient to uphold.
  - **Penalty damages**: Damages imposed that are greater than the actual harm done. Often not upheld by common law courts. But can be substituted with **performance bonus** instead, which are generally upheld by the courts.
- **Court-imposed damages**: Damages not specified in a contract, but issued by courts instead.
  - **Expectation damages (ED; "Positive damages")**: Make the promisee indifferent between performance and breach.

    Promisee's payoff without performance of the current contract + ED
    = Promisee's payoff with performance of the current contract

  - **Reliance damages (RD; "Negative damages")**: Make the promisee indifferent between not signing the contract in the first place and breach.

    Promisee's payoff without performance of the current contract + RD
    = Promisee's payoff before this contract is signed

  - **Opportunity cost damages (OD)**: Make the promisee indifferent between performance of their next best option and breach.

    Promisee's payoff without performance of the current contract + OD
    = Promisee's payoff with performance from their next-best option

  - Ranking: ED > OD > RD always
- Other court-ordered remedies:
  - **Restitution**: Contracting parties must return the money already received.
  - **Disgorgement**: Contracting parties must give up wrongfully-gained profits.
  - **Specific performance**: Forces the breaching party to live up to the terms specified in the contract.

2.3 Efficiency of remedies

Efficient breach	Under low TC, any remedy will lead to efficient breach per Coase theorem Under high TC, only ED will lead to efficient breach
Efficient signing	Potentially, penalty damages / performance bonus (ex. Peevyhouse case) ED may not lead to efficient signing
Efficient reliance	ED excluding benefits from reliance
Efficient investment in performance	ED (including reliance if reliance is made)

3 Problems

1. Anticipating a rent boom in Madison in the coming year, three housing developers, Adam, Bob and Chloe, attempt to acquire an old dilapidated townhouse to convert into a new student apartment. The developers have the following plans in mind.

	Adam	Bob	Chloe
Cost of converting to apartment	$60,000	$80,000	$120,000
Total anticipated future rent	$150,000	$180,000	$160,000

Here, total anticipated future rent level approximates total increase in land value for the developers.

The homeowner values their house at $30,000. To prepare the house for sale, the homeowner redecorates the walls and cleans up the basement, at a cost of $10,000.

(a) Assuming free bargaining, which developer will the homeowner sign a contract with? Assuming equal bargaining power (i.e. equal split of surplus), how much payment should the homeowner get?

If the homeowner signs a contract

- With Adam, the total surplus is $150,000 - 60,000 - 30,000 - 10,000 = \$50,000$
- With Bob, the total surplus is $180,000 - 80,000 - 30,000 - 10,000 = \$60,000$
- With Chloe, the total surplus is $160,000 - 120,000 - 30,000 - 10,000 = \$0$

Since trading with Bob generates the highest surplus, it is efficient to trade with Bob. With free bargaining, by Coase theorem, the outcome of the bargaining process would be the efficient outcome, which is the homeowner signing a contract with Bob.

Without bargaining, Bob's threat point is 0 (no contracting), the homeowner's threat point is **0**.

In an earlier version of the solution posted, the homeowner's threat point is thought to be $30,000. However, that's inconsistent with the reference level we've been using. To see this, we just said that

$$\text{Homeowner's payoff after signing the contract} = \text{Payment} - \$30,000 - \$10,000$$

This means that we are thinking homeowner's payoff before signing the contract is 0. Only in this way that the homeowner payoff will have a subtraction of the value of the house when the contract is performed. Apologies if this has caused any confusion!

Now, total surplus pre-bargaining $= 0 + 0 = 0$. After bargaining with Bob, social surplus has increased to $60,000$, so gains from cooperation $= \$60,000 - 0 = \$60,000$.

Assume equal bargaining power, each party receives $.5 \times \$60,000 = \$30,000$ of additional surplus compared with pre-bargaining outcome. Meaning that

$$\text{Homeowner's payoff after bargaining} = \text{Homeowner's payoff after bargaining}$$
$$\text{Payment} - \$30,000 - \$10,000 = \text{Homeowner's threat point} + \$30,000$$
$$\text{Payment} - \$30,000 - \$10,000 = 0 + \$30,000$$
$$\text{Payment} = \$70,000$$

We can also approach this from Bob's perspective:

$$\text{Bob's payoff after bargaining} = \text{Bob's payoff after bargaining}$$
$$\$180,000 - \$80,000 - \text{Payment} = \text{Bob's threat point} + \$30,000$$
$$\$180,000 - \$80,000 - \text{Payment} = 0 + \$30,000$$
$$\text{Payment} = \$70,000$$

Thus, the homeowner should get a payment of $70,000 from Bob.

(b) Now, with COVID-19, the developer you contracted with expects to only receive $150,000 in future anticipated rent. The developer attempts to back out of the contract, and the homeowner sues for damage payments.

  i. What is the amount of expectation damages?

The expectation damages should leave the homeowner indifferent between performance and breach of the contract:

$$\text{Payoff to homeowner when breach} + \text{ED} = \text{Payoff to homeowner when perform}$$
$$0 - \$10,000 + \text{ED} = \$70,000 - \$30,000 - \$10,000$$
$$\text{ED} = \$40,000$$

Thus, expectation damages should be $40,000.

  ii. What is the amount of reliance damages?

The reliance damages should compensate for the homeowner's reliance, leaving the homeowner as well off as he was before signing the contract.

$$\text{Payoff to homeowner when breach} + \text{RD} = \text{Payoff to homeowner before contract is signed}$$
$$0 - \$10,000 + \text{RD} = 0$$
$$\text{RD} = \$10,000$$

Therefore, the reliance damages should equal to $10,000.

  iii. What is the amount of opportunity cost damages?

The opportunity cost damages make the homeowner as well off as if he accepted the second best option, i.e. signing the contract with Adam.

Here, to figure out homeowner's payoff if contracted with Adam, we need to know how much payment homeowner would've gotten if homeowner freely bargains with Adam and evenly split the surplus.

- Threat point for Adam is 0, for homeowner is also 0.
  $\Rightarrow$ Total surplus pre-bargaining $= 0$
- Total surplus after bargaining with Adam is $50,000 by (a)
- Gains from cooperation $= \$50,000 - 0 = \$50,000$. Evenly split: $25,000 for each

$$\text{Adam's payoff after bargaining} = \text{Adam's payoff after bargaining}$$
$$\$150,000 - \$60,000 - \text{Payment} = 0 + \$25,000$$
$$\text{Payment} = \$65,000$$

Hence, to figure out OD:

$$\text{Payoff to homeowner when breach} + \text{OD} = \text{Payoff to homeowner if contracted with Adam}$$
$$0 - \$10,000 + \text{OD} = \$65,000 - \$30,000 - \$10,000$$
$$\text{OD} = \$35,000$$

Therefore, the opportunity cost damages should be $35,000.

iv. Does each of these damage rulings generate the efficient outcome?

If Bob breaches, then social surplus $= 0 - \$10,000 = -\$10,000$.

If Bob doesn't breach, then social surplus $= \$150,000 - \$80,000 - \$30,000 - \$10,000 = \$30,000$.

Since social surplus under not breaching is still higher, it's efficient for Bob to carry out the contract.

To see whether these damage rulings will generate the efficient outcome,

Damages	Bob's payoff when perform	Bob's payoff when breach	Bob would
ED	$\$150k - \$80k - \$70k = 0$	$-\$40k$	Perform
OD	0	$-\$35k$	Perform
RD	0	$-\$10k$	Perform

Thus, all damages will generate the efficient outcome.

(c) Suppose that instead of a damage rule, the court actually grants the homeowner a specific performance remedy. What do you expect to happen afterwards, if the homeowner and the developer could bargain freely?

Under the specific performance remedy, Bob is forced to complete the transaction and go forth with the building project.

From (b) iv., we learned that if Bob performs, then Bob's payoff is 0, so this is Bob's threat point.

When Bob performs, homeowner gets payoff $\$70,000 - \$30,000 - \$10,000 = \$30,000$, which is homeowner's threat point.

Now, Bob may want to bargain with the homeowner for a higher payoff. Notice that it wouldn't make sense for Bob to bargain to still perform and pay a higher amount to homeowner. So the only possible bargain is for Bob to pay homeowner some amount S so that Bob doesn't have to perform. In this case,

- Bob's payoff after bargain $= 0 - S = -S$
- Homeowner's payoff after bargain $= S - \$10,000 = S - \$10,000$

If the bargain takes place, we need each bargaining party's payoff to be higher than their respective threat points. This lead us to

$$\begin{cases} -S \geq 0 \\ S - \$10,000 \geq \$30,000 \end{cases}$$

Solving for the system of equation, this requires us to have $S \leq 0$ and $S \geq \$40,000$ hold at the same time, which is infeasible.

So no amount of potential transfer S exists, bargaining couldn't happen, and both parties will just agree to specific performance.

(Notice that this aligns with the principle that under low TC, any remedy will lead to efficient breach. Here, efficient breach happens only when Bob paying homeowner more still results in a higher payoff than performing, and the threshold for that is for total future anticipated rent to be less than $110k$ (you can check in this case that a valid S exists if bargain). Since the future total anticipated rent is currently higher than $110k$, low TC and specific performance remedy still achieved efficient amount of breach.)

(d) The housing developer makes an appeal and tries to invalidate the contract. What legal doctrines could they refer to?

Bob could potentially refer to the frustration of purpose doctrine. He could argue that he signs the contract with the sole purpose of profiting from rising rents. Now, with a declining rent level, the purpose is no longer fulfillable, and so the contract should be annulled. After all, it is easy for the homeowner to bear the risk – he could simply sell the house to someone else.

2. As the activities coordinator of the Economics department graduate student association, you have been tasked with organizing the department's annual winter party. You contract with a professional DJ service to provide the music. The DJ service must choose which of its two employees to send to your event:

- Tom (T) shows up with probability 1/2.
- Evan (E) shows up with probability 2/3 but costs the service an additional $55 (Evan keeps this fee).

The winter party will make the department $300 better off as currently planned. However, you have the opportunity to make reliance investments:

- You can purchase an additional keg of cheap beer (C) for $175 or expensive microbrew (E) for $250.
- These investments will increase the value of the party to the department by $300 and $390 respectively.

Alternatively, you can buy no beer (N) whatsoever.

If the DJ fails to show up, you will get nothing from these investments, because everyone will leave the party. The keg purchases available to you and the DJs available to the service are common knowledge.

(a) What is the efficient choice of DJ and reliance?

The six permutations have the following values for social surplus (SS):

- $SS(T,N) = 1/2 \times (300) = 150$
- $SS(T,C) = 1/2 \times (300 + 300) - 175 = 125$
- $SS(T,E) = 1/2 \times (300 + 390) - 250 = 95$
- $SS(E,N) = 2/3 \times (300) - 55 = 145$
- $SS(E,C) = 2/3 \times (300 + 300) - 175 - 55 = 170$
- $SS(E,E) = 2/3 \times (300 + 390) - 250 - 55 = 155$

Thus, sending Evan and getting the keg of cheap beer is the efficient choice of the DJ and reliance investment.

(b) What will you and the DJ service choose to do if reliance is included in expectation damages?

Let p be the probability that the DJ shows up $(= 1/2$ if Tom and $= 2/3$ if Evans). The utility of the Econ department under each reliance investment:

- $U(\cdot, N) = p(300) + (1 - p)(300) = 300$
- $U(\cdot, C) = p(300 + 300) + (1 - p)(300 + 300) - 175 = 425$
- $U(\cdot, E) = p(300 + 390) + (1 - p)(300 + 390) - 250 = 440$

Thus, it does not depend on p and regardless of who the DJ sends it chooses the expensive microbrew keg.

The DJ knows the econ department will have an expensive keg, and has to choose between the following profits:

- $\pi(T,E) = $ DJ service price $- (1 - 1/2) \times (300 + 390) = $ DJ service price $- 345$
- $\pi(E,E) = $ DJ service price $- (1 - 2/3) \times (300 + 390) - 55 = $ DJ service price $- 285$

(DJ service price is the same regardless of which DJ they sent).

Thus the DJ service will send Evan, since sending Evan yields them a higher profit.

(c) What will you and the DJ service choose to do if reliance is not included in expectation damages?

If reliance is not included in expectation damages, the DJ service's profits when sending Tom and Evans are:

- $\pi(T, E) = $ DJ service price $- (1 - 1/2) \times (300) = $ DJ service price $- 150$
- $\pi(E, E) = $ DJ service price $- (1 - 2/3) \times (300) - 55 = $ DJ service price $- 155$

So the DJ service will send Tom.

Now it is the econ department that must anticipate that, if damages do not include reliance, the promisor will choose Tom ($p = 1/2$). Thus

- $U(E, N) = 1/2(300) + (1 - 1/2)(300) = 300$
- $U(E, C) = 1/2(300 + 300) + (1 - 1/2)(300) - 175 = 285$
- $U(E, E) = 1/2(300 + 390) + (1 - 1/2)(300) - 250 = 245$

And thus, the Econ department will choose to buy the efficient quality of Keg (no beer). It is important to note that when the DJ service sends Tom, the efficient level of reliance is no beer:

$$SS(T, N) = 150 \quad > \quad SS(T, C) = 125 \quad > \quad SS(T, E) = 95$$

In (b), there was over investment in reliance because damages also internalize reliance benefits. Here, we have efficient reliance, but now the promisor (the DJ service) is underinvesting in performance, since they are no longer fully internalizing the performance benefits.

(d) Is social surplus higher when reliance is included or not included? If we care about efficiency, should we include reliance in damages or not?

The social surplus in each case (already computed in (a)) will be:

$SS(E, E) = 155$

$SS(T, N) = 150$

Thus, social surplus is higher when contracts include reliance in damages, making it the most efficient solution.