Argument Project Part 2: Propositional and Quantifier Formalization
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1. Empathy can be inhibited by bad first impressions, due to lack of trust and other factors. (premise)
2. Many autistic people empathize with, and even view themselves analogously as aliens. (premise)
3. Neurotypical children are unnerved by atypical forms of communication, leading to a bad first impression. (premise)
4. Atypical communication between autistic children is associated with a positive social response, preventing bad first impressions. (premise)
5. A group which empathizes more with its audience will be better at communicating with them than an unempathetic group would. (premise)
6. Aliens do not communicate the way typical humans do. (premise)
7. Autistic people would be more likely to have a good first impression with an alien than neurotypicals. (from 2, 3, 4, 6)
8. Autistic people would likely be more empathetic towards an alien than neurotypicals. (from 2, 3, 7)
9. Autistic people would likely be better at communicating with aliens than neurotypicals. (conclusion, from 1, 8)

1:

A = autistic
N = neurotypical
E = empathy towards aliens
G = good communication with aliens
B = bad first impression with aliens
C = Aliens communicate atypically

B→¬E, A→E, (N∧C)→ B, (A∧C)→¬B, E →G : A→G

2:

(truth table contained in attached Excel document for sake of brevity)

3:

1. B→¬E   (premise)
2. A→E   (premise)
3. N∧C→ B (premise)
4. A∧C→¬B (premise)
5. E →G   (premise)
6. C   (premise)
7. | A   (supp)
8. | E   (2, 7, MP)
9. | G   (5, 8, MP)
10. A→G   (7-9, CP)

With the premises given and using only propositional logic, we cannot entail neurotypicals being good *or* bad at communication with aliens; however, we *can* entail autistic people being good at communication with aliens.

4:

a = autistic people
b = neurotypical people
c = aliens
D = is empathetic towards
G = communicates better with _ than _
B = has a bad first impression of
C = communicates atypically

∀x[Bxy→¬Dxy], ∀a∀c[Dac], ∀b∀c[Cc→Bbc], ∀a∀c[Cc→¬Bac], ∀x∀y∀z[(Dxy∧¬Dzy)→Gxyz], ∀c[Cc] : ∀a∀b∀c[Gacb]

5:

1. ∀z∀y[Bzy→¬Dzy]   (premise)
2. ∀w∀y[Dwy]   (premise)
3. ∀y∀z[Cy→Bzy]   (premise)
4. ∀w∀y[Cy→¬Bwy]   (premise)
5. ∀w∀y∀z[(Dwy∧¬Dzy)→Gwyz]   (premise)
6. ∀y[Cy]   (premise)
7. ∀z∀y[Bzy]   (3, 6, MP)
8. ∀z∀y[¬Dzy]   (1, 7, MP)
9. ∀w∀y[Dwy]∧∀z∀y[¬Dzy]   (2, 8, ∧I)
10. ∀y(Day)∧∀z∀y[¬Dzy]   (9, ∀E)
11. ∀y(Day)∧ ∀y[¬Dby]   (10, ∀E)
12. Dac∧¬Dbc   (11, ∀E)
13. Gacb   (5, 12, MP)

Argument Project part 2: Patrick Weeks

Argument from part 1:

1)	A person is deserving of punishment only when they make an informed and sound decision to act unjustly.	(Premise)
2)	Any person who does something unjustly is ignorant of what is good.	(Premise)
3)	Those who are ignorant cannot make an informed decision.	(Premise)
4)	Those who act unjustly cannot make an informed decision.	(from 2,3,4)
5)	No person who acts unjustly is deserving of punishment.	(from 2,6)

1. Translate your argument into propositional logic.

D: Deserving of punishment
I: Make an informed decision
U: Acts unjustly
G: Ignorant of what is good

D → (I ∧ U), U → G, G → ¬I : U → ¬D

2. Use a truth-table to show that the argument is valid.

D	G	I	U	((D→(I∧U))∧	(U→G)	∧(G→¬I))	→	(U→¬D)
T	T	T	T	T	T	F	T	F F
F	T	T	F	T	T	F	T	T T
T	F	T	T	T	T	T	T	F F
F	F	T	T	T	T	T	T	T T
E	E	T	T	T	T	T	T	F F
T	T	F	T	F	F	T	T	T T
F	T	F	T	T	T	T	T	F F
T	F	F	T	F	F	T	T	T T
F	F	F	T	T	F	T	T	T F
T	T	T	F	F	T	F	T	T T
F	T	T	F	T	T	F	T	T F
T	F	T	F	F	T	T	T	T T
F	F	T	F	T	T	T	T	T F
T	T	F	F	F	T	T	T	T F
F	T	F	F	T	T	T	T	T T
T	F	F	F	F	T	T	T	T F
F	F	F	F	T	T	T	T	T T

3. Use the proof rules of propositional logic to prove it is valid.

$$D \rightarrow (I \wedge U), U \rightarrow G, G \rightarrow \neg I \therefore U \rightarrow \neg D$$

1)	$D \rightarrow (I \wedge U)$	Premise
2)	$U \rightarrow G$	Premise
3)	$G \rightarrow \neg I$	Premise
4)	U	Assumption
5)	G	2,4 MP
6)	$\neg I$	3,5 MP
7)	D	Assume
8)	$I \wedge U$	1,7 MP
9)	I	8 $\wedge$E
10)	$\perp$	6,9 Abs
11)	$\neg D$	7-10 RAA
12)	$U \rightarrow \neg D$	4-11 CP

4. Translate your argument into quantifier logic.

$$\forall x (D_x \rightarrow (I_x \wedge U_x)), \forall x (U_x \rightarrow G_x), \forall x (G_x \rightarrow \neg I_x) : \forall x (U_x \rightarrow \neg D_x)$$

5. Use the proof rules of propositional and quantifier logic to prove it is valid.

$$\forall x (D_x \rightarrow (I_x \wedge U_x)), \forall x (U_x \rightarrow G_x), \forall x (G_x \rightarrow \neg I_x) : \forall x (U_x \rightarrow \neg D_x)$$

1)	$\forall x (D_x \rightarrow (I_x \wedge U_x))$	Premise
2)	$\forall x (U_x \rightarrow G_x)$	Premise
3)	$\forall x (G_x \rightarrow \neg I_x)$	Premise
4)	$D_a \rightarrow (I_a \wedge U_a)$	1 $\forall$E
5)	$U_a \rightarrow G_a$	2 $\forall$E
6)	$G_a \rightarrow \neg I_a$	3 $\forall$E
7)	U_a	assume
8)	G_a	5,7 MP
9)	$\neg I_a$	6,8 MP
10)	D_a	Assume
11)	$I_a \wedge U_a$	4,10 MP
12)	I_a	11 $\wedge$E
13)	$\perp$	9,12 Abs
14)	$\neg D_a$	10-13 RAA
15)	$U_a \rightarrow \neg D_a$	7-14 CP
16)	$\forall x (U_x \rightarrow \neg D_x)$	15 $\forall$I

Symbolic Logic Argument Project Part Two

1. S = something exists that can collapse civilization. A = it should be abolished. W = nuclear war can happen. C = anything that can cause nuclear war exists. N = nuclear weapons exist.

(1) $S \rightarrow A$
(2) $W \rightarrow S$
(3) $C \rightarrow W$
(4) $N \rightarrow C$
(5) $: N \rightarrow A$

2. The argument is valid - there are no counterexamples where all of the premises are true and the conclusion is false.

S	A	W	C	N	$S \rightarrow A$	$W \rightarrow S$	C→W	N→C	: N→A
T	T	T	T	T	T	T	T	T	T
T	T	T	T	F	T	T	T	T	T
T	T	T	F	T	T	T	T	F	T
T	T	T	F	F	T	T	T	T	T
T	T	F	T	T	T	T	F	T	T
T	T	F	T	F	T	T	F	T	T
T	T	F	F	T	T	T	T	F	T
T	T	F	F	F	T	T	T	T	T
T	F	T	T	T	F	T	T	T	F
T	F	T	T	F	F	T	T	T	T
T	F	T	F	T	F	T	T	F	F
T	F	T	F	F	F	T	T	T	T
T	F	F	T	T	F	T	F	T	F
T	F	F	T	F	F	T	F	T	T
T	F	F	F	T	F	T	T	F	F

T	F	F	F	F	F	T	T	T	T
F	T	T	T	T	T	F	T	T	T
F	T	T	T	F	T	F	T	T	T
F	T	T	F	T	T	F	T	F	T
F	T	T	F	F	T	F	T	T	T
F	T	F	T	T	T	T	F	T	T
F	T	F	T	F	T	T	F	T	T
F	T	F	F	T	T	T	T	F	T
F	T	F	F	F	T	T	T	T	T
F	F	T	T	T	T	F	T	T	F
F	F	T	T	F	T	F	T	T	T
F	F	T	F	T	T	F	T	F	F
F	F	T	F	F	T	F	T	T	T
F	F	F	T	T	T	T	F	T	F
F	F	F	T	F	T	T	F	T	T
F	F	F	F	T	T	T	T	F	F
F	F	F	F	F	T	T	T	T	T

3. Propositional logic proof:

    (1) $S-> A$ (premise)
    (2) $W-> S$ (premise)
    (3) $C-> W$ (premise)
    (4) $N-> C$ (premise)
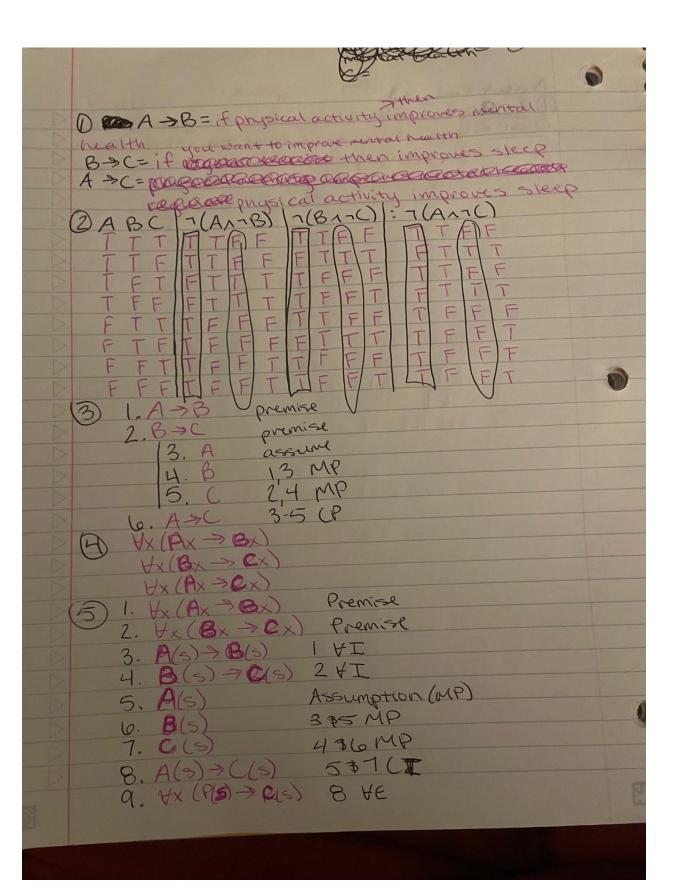   (5) $N-> W$ (MP 4, 3)
    (6) $N-> S$ (MP 5, 2)
    (7) : $N-> A$ (MP 6, 1)

4. Quantifier logic:

    (1) $\forall x(S(x)-> A(x))$

(2) $\forall x(W(x) \to S(x))$
(3) $\forall x(C(x) \to W(x))$
(4) $\forall x(N(x) \to C(x))$
(5) $: \forall x(N(x) \to A(x))$

5. Quantifier proof:

(1) $\forall x(S(x) \to A(x))$ (premise)
(2) $\forall x(W(x) \to S(x))$ (premise)
(3) $\forall x(C(x) \to W(x))$ (premise)
(4) $\forall x(N(x) \to C(x))$ (premise)
(5) $\forall x(N(x) \to W(x))$ (MP 4, 5)
(6) $\forall x(N(x) \to S(x))$ (MP 5, 2)
(7) $\forall x(N(x) \to A(x))$ (MP 6, 1)

① ~~...~~ A→B = if physical activity →then improves mental health. you want to improve mental health
B→C = if ~~...~~ then improves sleep
A→C = ~~...~~ ~~...~~ physical activity improves sleep

②

A	B	C	¬(A∧¬B)	¬(B∧¬C)	: ¬(A∧¬C)
T	T	T	T T F F	T T F F	T T F F
T	T	F	T T F F	F T T T	F T T T
T	F	T	F T T T	T F F F	T T F T
T	F	F	F T T T	T F F T	F T T T
F	T	T	T F F F	T T F F	T F F F
F	T	F	T F F F	F T T T	T F F T
F	F	T	T F F F	T T F T	T F F F
F	F	F	T F F F	T T F F	T F F T

③
1. A→B   premise
2. B→C   premise
   3. A   assume
   4. B   1,3 MP
   5. C   2,4 MP
6. A→C   3-5 CP

④ ∀x(Ax→Bx)
  ∀x(Bx→Cx)
  ∀x(Ax→Cx)

⑤
1. ∀x(Ax→Bx)   Premise
2. ∀x(Bx→Cx)   Premise
3. A(s)→B(s)   1 ∀I
4. B(s)→C(s)   2 ∀I
  5. A(s)   Assumption (MP)
  6. B(s)   3 &5 MP
  7. C(s)   4 &6 MP
8. A(s)→C(s)   5 &7 CP
9. ∀x(P(s)→Q(s))   8 ∀E

Argument Project: Informal Part (1)

1. The US should withhold military aid from Israel.
2.
- The US contributes billions of dollars in military aid to Israel every year.
- Israel is committing war crimes against the Palestinians in the ongoing conflict.
- Financial support of war crimes entails complicity.
- Complicity in war crimes goes against the Fourth Geneva convention, of which the US was a signatory.
- Breaking the human rights laws of the Geneva convention is grounds for trial at the Hague and shunning from the international community.
- Trial at the Hague and shunning by the international community should be avoided.
3.
- The US contributes billions of dollars in military aid to Israel every year.
  https://www.foreignassistance.gov/cd/israel/
- Israel is committing war crimes against the Palestinians in the ongoing conflict.
  https://www.un.org/sg/en/content/sg/speeches/2023-10-24/secretary-generals-remarks-the-security-council-the-middle-east%C2%A0#:~:text=I%20am%20deeply%20concerned%20about,is%20above%20international%20humanitarian%20law.
- Financial support of war crimes entails complicity.
  https://www.hrw.org/legacy/wr2k4/download/13.pdf
- Complicity in war crimes goes against the Fourth Geneva convention, of which the US was a signatory.
  https://ihl-databases.icrc.org/en/ihl-treaties/gciv-1949
- Breaking the human rights laws of the Geneva convention is grounds for trial at the Hague and shunning from the international community.
  https://www.icc-cpi.int/about/the-court
- Trial at the Hague and shunning by the international community should be avoided.
  http://hrlibrary.umn.edu/instree/Rome_Statute_ICC/Rome_ICC_part7.html
4.
(1) The US contributes billions of dollars in military aid to Israel every year.	(Premise)
(2) Israel is committing war crimes against the Palestinians in the ongoing conflict.	(Premise)
(3) Financial support of war crimes entails complicity.	(Premise)
(4) Complicity in war crimes goes against the Fourth Geneva convention, of which the US was a signatory.	(Premise)
(5) Breaking the human rights laws of the Geneva convention is grounds for trial at the Hague and shunning from the international community.	(Premise)
(6) Trial at the Hague and shunning by the international community should be avoided.	(Premise)
(7) A nation that contributes military financial support to Israel is complicit in war crimes.	(From 2,3)
(8) The US is complicit in war crimes.	(From 1,7)
(9) The US is in violation of the Fourth Geneva Convention.	(From 4,8)
(10) There are sufficient grounds to try the US at the Hague and for the country to be shunned by the International community.	(From 5,9)
(11) Therefore, the US should withhold military aid from Israel.	(From 6,10)

5. Fallacious Arguments:

For (Appeal to Irrelevant Authority):

- "The President of the American Nazi Party stated that Israel is evil because it is a Jewish state. The US contributes billions of dollars in military aid to Israel every year. Therefore, the US should withhold military aid from Israel."
- This argument is clearly an appeal to irrelevant authority because it invokes a statement from a very biased individual who likely knows nothing of the matter and bases his statement on antisemitic tropes unrelated to the relevant moral quandary.

For (Slippery Slope):

- "The US contributes billions of dollars in military aid to Israel every year. If we continue to send aid to Israel, then one day we will eventually have given all our money to Israel. To be a country with no money at all is surely bad. Therefore, the US should withhold military aid from Israel."
- This argument presupposes a ridiculous conditional proposition. Just because the antecedent is true, it is almost entirely outside of the realm of possibility that the consequent will follow.

Against (Appeal to the Bandwagon):

- "The US contributes billions of dollars in military aid to Israel every year. Most of the American Jewish community would like this trend to continue. Therefore, the US should continue to send military aid to Israel."
- This argument relies on the affirmation of a majority opinion to support the conclusion. Widespread support, even unanimity, does not guarantee the truth of a claim, which has been shown many times throughout history.

Against (Appeal to Hypocrisy):

- "The US contributes billions of dollars in military aid to Israel every year. Israel may be committing war crimes, but the US has also committed plenty of their own. Since they're no better, it would be hypocritical for the US to stop sending military aid to Israel."
- This argument attempts to invalidate a moral argument by supposing that hypocrisy is worse than further moral and political consequences. Whether or not the US is a hypocrite if they were to withhold aid from Israel, it does not change the value of the decision.

1.

P: The US contributes billions of dollars in military aid to Israel every year.

Q: Israel is committing war crimes against the Palestinians in the ongoing conflict.

R: Financial support of war crimes entails complicity.

S: Complicity in war crimes goes against the Fourth Geneva Convention, of which the US was a signatory.

T: Breaking the human rights laws of the Geneva Convention is grounds for trial at the Hague and shunning from the international community.

U: Trial at the Hague and shunning by the international community should be avoided.

V: The US should withhold military aid from Israel.

P, Q, R, S, T, U, V, [(P ∧ Q ∧ R ∧ S ∧ T ∧ U) → V] : V

2.

P	Q	R	S	T	U	V	[(P∧Q∧R∧S∧T∧U) → V]		V
T	T	T	T	T	T	T	T		T
T	T	T	T	T	T	F	F		F
T	T	T	T	T	F	T	T		T
T	T	T	T	T	F	F	T		F
T	T	T	T	F	T	T	T		T
T	T	T	T	F	T	F	T		F
T	T	T	T	F	F	T	T		T
T	T	T	T	F	F	F	T		F
T	T	T	F	T	T	T	T		T
T	T	T	F	T	T	F	T		F
T	T	T	F	T	F	T	T		T
T	T	T	F	T	F	F	T		F
T	T	T	F	F	T	T	T		T
T	T	T	F	F	T	F	T		F
T	T	T	F	F	F	T	T		T
T	T	T	F	F	F	F	T		F
T	T	F	T	T	T	T	T		T
T	T	F	T	T	T	F	T		F
T	T	F	T	T	F	T	T		T
T	T	F	T	T	F	F	T		F
T	T	F	T	F	T	T	T		T
T	T	F	T	F	T	F	T		F
T	T	F	T	F	F	T	T		T

T	T	F	T	F	F	F	T		F
T	T	F	F	T	T	T	T		T
T	T	F	F	T	T	F	T		F
T	T	F	F	T	F	T	T		T
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T	T	F	F	F	T	T	T		T
T	T	F	F	F	T	F	T		F
T	T	F	F	F	F	T	T		T
T	T	F	F	F	F	F	T		F
T	F	T	T	T	T	T	T		T
T	F	T	T	T	T	F	T		F
T	F	T	T	T	F	T	T		T
T	F	T	T	T	F	F	T		F
T	F	T	T	F	T	T	T		T
T	F	T	T	F	T	F	T		F
T	F	T	T	F	F	T	T		T
T	F	T	T	F	F	F	T		F
T	F	T	F	T	T	T	T		T
T	F	T	F	T	T	F	T		F
T	F	T	F	T	F	T	T		T
T	F	T	F	T	F	F	T		F
T	F	T	F	F	T	T	T		T
T	F	T	F	F	T	F	T		F
T	F	T	F	F	F	T	T		T
T	F	T	F	F	F	F	T		F
T	F	F	T	T	T	T	T		T
T	F	F	T	T	T	F	T		F
T	F	F	T	T	F	T	T		T
T	F	F	T	T	F	F	T		F
T	F	F	T	F	T	T	T		T
T	F	F	T	F	T	F	T		F
T	F	F	T	F	F	T	T		T
T	F	F	T	F	F	F	T		F
T	F	F	F	T	T	T	T		T
T	F	F	F	T	T	F	T		F
T	F	F	F	T	F	T	T		T
T	F	F	F	T	F	F	T		F
T	F	F	F	F	T	T	T		T
T	F	F	F	F	T	F	T		F
T	F	F	F	F	F	T	T		T
T	F	F	F	F	F	F	T		F
F	T	T	T	T	T	T	T		T
F	T	T	T	T	T	F	T		F
F	T	T	T	T	F	T	T		T
F	T	T	T	T	F	F	T		F
F	T	T	T	F	T	T	T		T
F	T	T	T	F	T	F	T		F
F	T	T	T	F	F	T	T		T
F	T	T	T	F	F	F	T		F

F	T	T	F	T	T	T	T			T
F	T	T	F	T	T	F	T			F
F	T	T	F	T	F	T	T			T
F	T	T	F	T	F	F	T			F
F	T	T	F	F	T	T	T			T
F	T	T	F	F	T	F	T			F
F	T	T	F	F	F	T	T			T
F	T	T	F	F	F	F	T			F
F	T	F	T	T	T	T	T			T
F	T	F	T	T	T	F	T			F
F	T	F	T	T	F	T	T			T
F	T	F	T	T	F	F	T			F
F	T	F	T	F	T	T	T			T
F	T	F	T	F	T	F	T			F
F	T	F	T	F	F	T	T			T
F	T	F	T	F	F	F	T			F
F	T	F	F	T	T	T	T			T
F	T	F	F	T	T	F	T			F
F	T	F	F	T	F	T	T			T
F	T	F	F	T	F	F	T			F
F	T	F	F	F	T	T	T			T
F	T	F	F	F	T	F	T			F
F	T	F	F	F	F	T	T			T
F	T	F	F	F	F	F	T			F
F	F	T	T	T	T	T	T			T
F	F	T	T	T	T	F	T			F
F	F	T	T	T	F	T	T			T
F	F	T	T	T	F	F	T			F
F	F	T	T	F	T	T	T			T
F	F	T	T	F	T	F	T			F
F	F	T	T	F	F	T	T			T
F	F	T	T	F	F	F	T			F
F	F	T	F	T	T	T	T			T
F	F	T	F	T	T	F	T			F
F	F	T	F	T	F	T	T			T
F	F	T	F	T	F	F	T			F
F	F	T	F	F	T	T	T			T
F	F	T	F	F	T	F	T			F
F	F	T	F	F	F	T	T			T
F	F	T	F	F	F	F	T			F
F	F	F	T	T	T	T	T			T
F	F	F	T	T	T	F	T			F
F	F	F	T	T	F	T	T			T
F	F	F	T	T	F	F	T			F
F	F	F	T	F	T	T	T			T
F	F	F	T	F	T	F	T			F
F	F	F	T	F	F	T	T			T
F	F	F	T	F	F	F	T			F
F	F	F	F	T	T	T	T			T

F	F	F	F	T	T	F	T		F
F	F	F	F	T	F	T	T		T
F	F	F	F	T	F	F	T		F
F	F	F	F	F	T	T	T		T
F	F	F	F	F	T	F	T		F
F	F	F	F	F	F	T	T		T
F	F	F	F	F	F	F	T		F

3.

1 | P   (Premise)

2 | Q   (Premise)

3 | R   (Premise)

4 | S   (Premise)

5 | T   (Premise)

6 | U   (Premise)

7 | [(P ∧ Q ∧ R ∧ S ∧ T ∧ U) → V]   (Premise)

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8 | P ∧ Q   (∧I 1,2)

9 | P ∧ Q ∧ R   (∧I 8,3)

10 | P ∧ Q ∧ R ∧ S   (∧I 9,4)

11 | P ∧ Q ∧ R ∧ S ∧ T   (∧I 10,5)

12 | P ∧ Q ∧ R ∧ S ∧ T ∧ U   (∧I 11,6)

13 | V   (MP 12, 7)

4.

Gab: The US contributes billions of dollars in military aid to Israel every year.

Hb: Israel is committing war crimes against the Palestinians in the ongoing conflict.

[(Gxy ∧ Hy) → Ix]: Financial support of war crimes entails complicity.

[Ix→ Jx] Complicity in war crimes goes against the Fourth Geneva Convention, of which the US was a signatory.

[Jx → Kx]: Breaking the human rights laws of the Geneva Convention is grounds for trial at the Hague and shunning from the international community.

[(Kx ∧ Hy) → Lxy]: Trial at the Hague and shunning by the international community should be avoided.

Lab: The US should withhold military aid from Israel.

a: The US

b: Israel

G: contributes financial support to.

H: is committing war crimes.

I: is complicit in war crimes.

J: is breaking the Fourth Geneva condition, of which they are a signatory.

K: is liable to be tried at the Hague and shunned by the international community.

L: should withhold military aid from.

5.

1	Gab	(Premise)
2	Hb	(Premise)
3	[(Gxy ∧ Hy) → Ix]	(Premise)
4	[Ix→ Jx]	(Premise)
5	[Jx → Kx]	(Premise)
6	[(Kx ∧ Hy) → Lxy]	(Premise)
7	Gab ∧ Hb	(∧I 1,2)
8	Ia	(MP 7,3)
9	Ja	(MP 8,4)
10	Ka	(MP 9,5)
11	Ka ∧ Hb	(∧I 10,2)
11	Lab	(MP 11,6)

ARGUMENT PROJECT 2

1. Translate into P-logic:

$$(A \wedge B), B \rightarrow \neg C, (\neg C \rightarrow \neg D) : \neg D$$

A = Humans are alive in the Womb

B = All human life is Valuable

C = It is moral to take a life

D = It is moral to have an abortion

2. Truth table:

A	B	C	D	$(A \wedge B)$	$B \rightarrow \neg C$	$(\neg C \rightarrow \neg D)$	$\neg D$
T	T	T	T	T	F T	T F F	F
T	F	T	T	F	T T	T F F	F
T	T	F	T	T	F F	F T F	F
T	F	F	F	F	T F	F T T	T
T	T	T	F	T	T	T T T	T
T	F	T	F	F	T T	T T T	T
T	T	F	T	T	F F	F T F	F

T	F	F	T		F		T	F	F	T	F		F
F	T	T	T		F		T	T	T	F	F		F
F	F	T	F		F		T	T	T	T	T		T
F	T	F	F		F		F	F	F	T	T		T
F	F	F	F		F		T	F	F	T	T		T
F	T	T	F		F		T	T	T	T	T		T
F	F	T	T		F		T	T	T	F	F		F
F	T	F	T		F		F	F	F	T	F		F
F	F	F	F		F		T	F	F	T	T		T

My argument is valid. There are no instances in which all premises are true and the conclusion is false.

3. P-logic Proof:

1.		(A∧B)	Premise
2.		(B → ¬C)	Premise
3.		(¬C → ¬D)	Premise
4.		B	VE line 1
5.		¬C	MP lines 2,4
6.		¬D	MP lines 3,5

4. Translate into Q-logic

$$\forall x\,[H_x \land W_x],\ \forall x\,[H_x \to V_x],\ \forall x\,[V_x \to \neg K_x],\ \forall x\,[\neg K_x \to \neg A_x] : \forall x\,[\neg A_x]$$

W = is in the womb
H = is human
V = is valuable
K = is moral to kill
A = is moral to abort

5.

1.	$\forall x\,[H_x \land W_x]$	Premise
2.	$\forall x\,[H_x \to V_x]$	Premise
3.	$\forall x\,[V_x \to \neg K_x]$	Premise
4.	$\forall x\,[\neg K_x \to \neg A_x]$	Premise
5.	$H_a \land W_a$	$\forall E$ line 1
6.	H_a	$\land E$ line 5
7.	$H_a \to V_a$	$\forall E$ line 2
8.	V_a	CP lines 6, 7
9.	$V_a \to \neg K_a$	$\forall E$ line 3

10. $\neg Ka$ CP lines 8, 9
11. $\neg Ka \rightarrow \neg Aa$ $\forall E$ line 4
12. $\neg Aa$ CP lines 11, 12
13. $\forall x (Ax)$ $\forall I$ line 12.