

Survey material: KM belief update

U1 conclusion rule

Given

1. Jacob B is a truck driver (new information)

The new information (1) follows from the result of updating ψ with the new information (1).

U2 premise rule

Given

1. Noel W is a strong firefighter (new information)

The new information (1) follows from ψ .

U2 conclusion 1 rule

Given

1. Noel W is a strong firefighter (new information)

ψ follows from the result of updating ψ with the new information (1).

U2 conclusion 2 rule

Given

1. Noel W is a strong firefighter (new information)

The result of updating ψ with the new information (1), follows from ψ .

U3 premise rule

Given

1. Eric V is a football player from Slovenia (new information)

Both ψ and the new information (1), is satisfiable.

U3 conclusion rule

Given

1. Eric V is a football player from Slovenia (new information)

The result of updating ψ with the new information (1), is satisfiable.

U4 premise 1 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

ψ_2 follows from ψ_1 .

U4 premise 2 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

ψ_1 follows from ψ_2 .

U4 premise 3 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

The new information (1) follows from the new information (2).

U4 premise 4 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

The new information (2) follows from the new information (1).

U4 conclusion 1 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

The result of updating ψ_2 with the new information (2), follows from the result of updating ψ_1 with the new information (1).

U4 conclusion 2 rule

Given

1. Zeeta M is a classical pianist (new information)
2. Zeeta M does play the piano (new information)
3. ψ_1 (a belief base)
4. ψ_2 (a belief base, different to ψ_1)

The result of updating ψ_1 with the new information (1), follows from the result of updating ψ_2 with the new information (2).

U5 conclusion rule

Given

1. Wilma D is a car owner (new information)
2. Wilma D does pay insurance (new information)
3. The result of updating ψ with the information that Wilma D is a car owner \wedge Wilma D does pay insurance (statement)
4. Wilma D is a car owner \wedge Wilma D does pay insurance (statement)

The result of updating ψ with statement (4), follows from statement (3).

U6 premise rule

Given

1. Chris P is a waiter (new information)
2. Chris P has profound knowledge of the menu (new information)

The new information (2) follows from the result of updating ψ with new information (1), and the new information (1) follows from the result of updating ψ with new information (2).

U6 conclusion 1 rule

Given

1. Chris P is a waiter (new information)
2. Chris P has profound knowledge of the menu (new information)

The result of updating ψ with the new information (2) follows from the result of updating ψ with the new information (1).

U6 conclusion 2 rule

Given

1. Chris P is a waiter (new information)
2. Chris P has profound knowledge of the menu (new information)

The result of updating ψ with the new information (1) follows from the result of updating ψ with the new information (2).

U7 premise rule

ψ is complete.

U7 conclusion rule

Given

1. Jessica B is a yoga instructor (new information)
2. Jessica B does teach breathing exercises (new information)
3. new information (1) \wedge new information (2) (statement)
4. The result of updating ψ with the new information (1) \wedge the result of updating ψ with the new information (2) (statement)

The result of updating ψ with statement (3), follows from statement (4).

U8 conclusion 1 rule

Given

1. Philip P is a police officer (new information)
2. ψ_1 (a belief base)
3. ψ_2 (a belief base, different to ψ_1)
4. $\psi_1 \vee \psi_2$ (statement)
5. The result of updating ψ_1 with the new information (1) (statement)
6. The result of updating ψ_2 with the new information (1) (statement)
7. statement (5) \vee statement (6) (statement)

Statement (7) follows from the result of updating statement (4) with the new information (1).

U8 conclusion 2 rule

Given

1. Philip P is a police officer (new information)
 2. ψ_1 (a belief base)
 3. ψ_2 (a belief base, different to ψ_1)
 4. $\psi_1 \vee \psi_2$ (statement)
 5. The result of updating ψ_1 with the new information (1) (statement)
 6. The result of updating ψ_2 with the new information (1) (statement)
- statement (5) \vee statement (6) (statement)

The result of updating statement (4) with the new information (1), follows from statement (7).

U9 premise rule

Given

1. Mark M is a science professor (new information)
2. Mark M does enjoy solving problems (new information)
3. new information (1) \wedge new information (2) (statement)
4. The result of updating ψ with the new information (1) (statement)
5. The result of updating the new information (1) with new information (2) (statement)

ψ is complete, and the result of statement (4) \wedge new information (2) is satisfiable.

U9 conclusion rule

Given

1. Mark M is a science professor (new information)
2. Mark M does enjoy solving problems (new information)
3. new information (1) \wedge new information (2) (statement)
4. The result of updating ψ with the new information (1) (statement)
5. The result of updating the new information (1) with new information (2) (statement)

The result of updating statement (4) with new information (2), follows from the result of updating ψ with statement (5).

Ends.