

Supplemental Materials File

The UAE Context and the Arab Identity

The United Arab Emirates is a highly diverse and multicultural society. Emirati nationals make up approximately 11% of the population, with 89% of the population being foreign residents. The Emirati identity respects its Arab heritage, and Arab nationals receive some special privileges within the country in terms of employment and potential applications for citizenship. Although the ethno-cultural identity of being Arab is a superordinate category that may glaze over important differences among regional or national subgroups, it represents a meaningful identity rooted in shared history, language, and culture. In that way it is similar to our White American participants, who also include distinct subgroups, but share history, language, and visible identity.

Language

In the UAE, Arabic is the national language, with modern standard Arabic taught in national schools, and Khaleeji (Gulf) dialect spoken in the homes of most nationals. Arabic is spoken in dialect which varies across the Middle East/North Africa (MENA) region, and thus across our diverse sample of Arab participants. Written Arabic takes the form of “modern standard.” It is not a spoken language - thus, not a native language - and differs from the diverse dialects that our participants speak.

Due to the large foreign resident population of the UAE, there are also a number of different national curriculums for K-12 school, where the majority of the curriculum may be taught in a different language. English is widely spoken in society as the common language of foreign residents, and government documents are printed in English and Arabic.

These studies include a sample of Arab students at an international university in the UAE who represent many nationalities and speak a variety of Arabic dialects. Admission to this institution requires fluency in written English, as English is the language of instruction, but there are no requirements regarding fluency in Arabic.

Because modern standard (written) Arabic is not a native language, because fluency in modern standard Arabic varies within our sample, and because the language of instruction at the data collection institution is English, we collected all data in English.

Experimental Programs

For ease of access, all materials used in Studies 1-5 are described below. Experimental program files and materials with qualtrics and/or MediaLab display rules are also available at https://osf.io/ejv8n/?view_only=68cc5ad514a64714a48d3e41255b775f

Materials: Study 1

Instructions

In this study, we will ask you to read descriptions about different events. Please take a moment to imagine that each event really happened--think about what is going on in the story, what happened to the person described, how they would think and feel, etc.

Please make sure you read each paragraph carefully. Afterwards, you will answer some questions about the event and your thoughts and feelings related to each event. Later, we will ask some questions about your thoughts and feelings in general.

Car Accident

Control condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route, though occasionally if the weather is nice he decides to take a longer, more scenic route. One morning, while Adam is following his typical routine, another driver enters the freeway, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam suffers a serious back injury, and spends two weeks in the hospital.

Counterfactual condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route. One morning, Adam decides to take a longer, more scenic route, allowing him to enjoy the nice weather. While he is driving, another driver enters the road, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam suffers a serious back injury, and spends two weeks in the hospital.

Car Accident DVs

Antecedent (If-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have been injured."

Look at only the first part of the statement above, "If only Adam had taken another route...".

What was the likelihood that Adam could have taken another route?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Consequences (Then-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have been injured." Look at only the second part of the statement above, "...THEN Adam would not have been injured."

Assuming that Adam had taken another route, what is the likelihood that he would have avoided the injury—that is, the likelihood that he would have arrived at his destination unharmed?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Fate

To what extent was Adam's accident caused by fate?

1	2	3	4	5	6
Not at all					Entirely
determined by					determined by
fate					fate

To what extent was this accident "meant to be"?

1	2	3	4	5	6
Not at all					Completely

Personal control

To what extent was this accident caused by Adam's personal actions?

1	2	3	4	5	6
Not at all					Completely

Luck

To what extent was this accident caused by random chance or "bad luck"?

1	2	3	4	5	6
Not at all					Completely

Equifinality

Even if Adam had taken a different route, he probably would have gotten into an accident.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Blame

The other driver should have to pay for Adam's medical bills.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Regret

Adam would feel a lot of regret about his choice to take this route.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Construction Accident

Control condition

Sara lives in an apartment building, right in the heart of the city. She loves the convenience of her location. In particular, there is a grocery store right across the street from her building, and Sara does most of her shopping there. There is another store farther down the street, but Sara rarely shops there. One day, Sara is preparing dinner, and decides she wants flowers for the table. She crosses the street to visit her usual store, when she is hit by falling debris from construction on the store. She survives, but loses the use of her left arm.

Counterfactual Condition

Sara lives in an apartment building, right in the heart of the city. She loves the convenience of her location. In particular, there is a grocery store right across the street from her building, and Sara does most of her shopping there. There is another store farther down the street, but Sara rarely shops there. One day, Sara is preparing dinner, and decides she wants flowers for the table. Because it's a lovely day and she feels like taking a walk, she decides to walk down the street to the farther store, when she is hit by falling debris from construction on the store. She survives, but loses the use of her left arm.

Construction Accident DVs

Antecedent (If-likelihood)

Please consider the thought "If only Sara had gone to a different store, then she would not have been injured."

Look at only the first part of the statement above, "IF only Sara had gone to a different store..."

What was the likelihood that Sara could have gone to a different store?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Consequences (Then-likelihood)

Please consider the thought "If only Sara had gone to a different store, then she would not have been injured." Look at only the second part of the statement above, "...THEN Sara would not have been injured."

Assuming that Sara had gone to a different store, what is the likelihood that she would have avoided the injury—that is, the likelihood that she would have gotten to the store unharmed?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Fate

To what extent was Sara's accident caused by fate?

1	2	3	4	5	6
Not at all					Entirely
determined by					determined by
fate					fate

To what extent was this accident "meant to be"?

1	2	3	4	5	6
Not at all					Completely

Personal control

To what extent was this accident caused by Sara's personal actions?

1	2	3	4	5	6
Not at all					Completely

Luck

To what extent was this accident caused by random chance or "bad luck"?

1	2	3	4	5	6
Not at all					Completely

Equifinality

Even if Sara had gone to a different store, she probably would have been injured.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Blame

The construction company should have to pay for Sara's medical bills.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Regret

Sara would feel a lot of regret about his choice to go to this store.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Dispositional Control Beliefs instructions

In the next part of the study, we are interested in learning more about how you think about the world around you, including your spiritual or religious beliefs.

(Esparza, Wiebe, and Quiñones (2014) 30 item Fatalism Measure, available in their original paper)

Materials: Study 2

Instructions

In this study, we will ask you to read descriptions about an event. Please take a moment to imagine that the event really happened--think about what is going on in the story, what happened to the person described, how they would think and feel, etc.

Please make sure you read each paragraph carefully. Afterwards, you will answer some questions about the event and your thoughts and feelings related to each event. Later, we will ask some questions about your thoughts and feelings in general.

Control Condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route, though occasionally if the weather is nice he decides to take a longer, more scenic route. One morning, while Adam is following his typical routine, another driver enters the freeway, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam suffers a serious back injury, and spends two weeks in the hospital.

Counterfactual Condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route. One morning, Adam decides to take a longer, more scenic route, allowing him to enjoy the nice weather. While he is driving, another driver enters the road, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam suffers a serious back injury, and spends two weeks in the hospital.

Dependent Measures

Thought listing instructions

We are interested in understanding how people respond to different kinds of events. What kinds of thoughts do you think Adam would have about this situation? What might he be telling himself or thinking about after the accident? In the space below, please describe whatever thoughts come to mind as the most likely things Adam might be thinking after this situation.

[Vignette reappeared above a text box]

Actor counterfactual: Antecedent (If-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have been injured."

Look at only the first part of the statement above, "If only Adam had taken another route...".

What was the likelihood that Adam could have taken another route?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Consequences (Then-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have been injured." Look at only the second part of the statement above, "...THEN Adam would not have been injured."

Assuming that Adam had taken another route, what is the likelihood that he would have avoided the injury—that is, the likelihood that he would have arrived at his destination unharmed?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Situation Counterfactual: Antecedent (If-likelihood)

Please consider the thought "If only the traffic had been different, then Adam would not have been injured."

Look at only the first part of the statement above, "IF only the traffic had been different...".

What was the likelihood that the traffic could have been different?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Consequences (Then-likelihood)

Please consider the thought "If only the traffic had been different, then Adam would not have been injured."

Look at only the second part of the statement above, "...THEN Adam would not have been injured."

Assuming that the traffic had been different, what is the likelihood that Adam would have avoided the injury—that is, the likelihood that he would have arrived at his destination unharmed?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Dependent measures instructions

We'd now like you to answer some questions about your own thoughts and feelings about Adam's accident.

Fate

To what extent was Adam's accident caused by fate?

1	2	3	4	5	6
Not at all determined by fate					Entirely determined by fate

To what extent was this accident "meant to be"?

1	2	3	4	5	6
Not at all					Completely

Personal control

To what extent was this accident caused by Adam's personal actions?

1	2	3	4	5	6
Not at all					Completely

Luck

To what extent was this accident caused by random chance or "bad luck"?

1	2	3	4	5	6
Not at all					Completely

Equifinality

Even if Adam had taken a different route, he probably would have gotten into an accident.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Regret

Adam would feel a lot of regret about his choice to take this route.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Surprise

How surprising did Adam's accident seem?

1	2	3	4	5	6
Not at all					Completely

How expected did Adam's accident seem? *Note: Reverse scored*

1	2	3	4	5	6
Not at all					Completely

How predictable did Adam's accident seem? *Note: Reverse scored*

1	2	3	4	5	6
Not at all					Completely

Dispositional Control Beliefs instructions

In the next part of the study, we are interested in learning more about how you think about the world around you, including your spiritual or religious beliefs.

(Esparza, Wiebe, and Quiñones (2014) 30 item Fatalism Measure, available in their original paper)

Fate

To what extent was Adam's accident caused by fate?

1	2	3	4	5	6
Not at all					Entirely
determined by					determined by
fate					fate

To what extent was this accident "meant to be"?

1	2	3	4	5	6
Not at all					Completely

Personal control

To what extent was this accident caused by Adam's personal actions?

1	2	3	4	5	6
Not at all					Completely

Luck

To what extent was this accident caused by random chance or "bad luck"?

1	2	3	4	5	6
Not at all					Completely

Equifinality

Even if Adam had taken a different route, he probably would have gotten into an accident.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Regret

Adam would feel a lot of regret about his choice to take this route.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly Agree
Disagree		Disagree	Agree		

Behavior Change

Adam will probably avoid taking this road to work in the future.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly
Disagree		Disagree	Agree		Agree

Normal Route

Adam would be likely to take his normal route to work in the future.

1	2	3	4	5	6
Strongly	Disagree	Somewhat	Somewhat	Agree	Strongly
Disagree		Disagree	Agree		Agree

Impact

This event likely changed the direction of Adam's life.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

This event likely had a significant impact on Adam's life.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Dispositional Control Beliefs instructions

In the next part of the study, we are interested in learning more about how you think about the world around you, including your spiritual or religious beliefs.

(Esparza, Wiebe, and Quiñones (2014) 30 item Fatalism Measure, available in their original paper)

Materials: Study 4

Instructions

In this study, we will ask you to read descriptions about different events. Please take a moment to imagine that each event really happened--think about what is going on in the story, what happened to the person described, etc. We'd like you to put yourself in this person's perspective and imagine what you would think and feel if this had actually happened to you.

Please make sure you read each paragraph carefully. Afterwards, you will answer some questions about the event and your thoughts and feelings related to each event. Later, we will ask some questions about your thoughts and feelings in general.

Control Condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route, though occasionally if the weather is nice he decides to take a longer, more scenic route. One morning, while Adam is following his typical routine, another driver enters the freeway, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam's car is damaged and requires minor repairs, and the accident makes him a few minutes late for work.

Counterfactual Condition

Every day, Monday through Friday, Adam leaves his house for work right around 8:00, arriving at the office by 8:30. He typically takes the freeway, which is the most direct route. One morning, Adam decides to take a longer, more scenic route, allowing him to enjoy the nice weather. While he is driving, another driver enters the road, and quickly moves into Adam's lane. Adam cannot avoid the car, and they collide. Adam's car is damaged and requires minor repairs, and the accident makes him a few minutes late for work.

Dependent Measures

Thought listing instructions

We are interested in understanding how people respond to different kinds of events. If you were in Adam's position, what kinds of thoughts would you have about this situation? What might you be telling yourself or thinking about after the accident? In the space below, please describe whatever thoughts come to mind as the most likely things you might be thinking after this situation if you were in Adam's position.

[Vignette reappeared above a text box]

Antecedent (If-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have gotten into an accident."

Look at only the first part of the statement above, "IF only Adam had taken another route...". What was the likelihood that Adam could have taken another route?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Consequences (Then-likelihood)

Please consider the thought "If only Adam had taken another route, then he would not have gotten into an accident." Look at only the second part of the statement above, "...THEN Adam would not have gotten into an accident."

Assuming that Adam had taken another route, what is the likelihood that he would have avoided the accident – that is, what is the likelihood that he would have gotten to work without crashing?

1	2	3	4	5	6
Extremely Unlikely					Extremely Likely

Fate

To what extent was Adam's accident caused by fate?

1	2	3	4	5	6
Not at all determined by fate					Entirely determined by fate

To what extent was this accident "meant to be"?

1	2	3	4	5	6
Not at all					Completely

Personal control

To what extent was this accident caused by Adam's personal actions?

1	2	3	4	5	6
Not at all					Completely

Luck

To what extent was this accident caused by random chance or "bad luck"?

1	2	3	4	5	6
Not at all					Completely

Equifinality

Even if Adam had taken a different route, he probably would have gotten into an accident.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Regret

If I were in Adam's position, I would feel a lot of regret about choosing to take this route.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Behavior Change

If I were in Adam's position, I would probably avoid taking this road to work in the future.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Normal Route

If I were in Adam's position, I would be likely to take the normal route to work in the future.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Impact

This event likely changed the direction of Adam's life.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

This event likely had a significant impact on Adam's life.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

Dispositional Control Beliefs instructions

In the next part of the study, we are interested in learning more about how you think about the world around you, including your spiritual or religious beliefs.

(Esparza, Wiebe, and Quiñones (2014) 30 item Fatalism Measure, available in their original paper)

Regret

If you were in Adam's situation, to what extent would you feel a lot of regret about your choice to take this route?

1	2	3	4	5	6
Not at all					Completely

If you were in Adam's situation, to what extent would you feel like kicking yourself?

1	2	3	4	5	6
Not at all					Completely

If you were in Adam's situation, to what extent would you think that you should have done something differently?

1	2	3	4	5	6
Not at all					Completely

If you were in Adam's situation, to what extent would you feel a lot of self-blame?

1	2	3	4	5	6
Not at all					Completely

Dispositional Control Beliefs instructions

In the next part of the study, we are interested in learning more about how you think about the world around you, including your spiritual or religious beliefs.

(Esparza, Wiebe, and Quiñones (2014) 18 item Fatalism Measure, available in their original paper; in this study, we measured only Divine Control, Fate, and Internal Control)

Included with this scale was the item: "Please select Somewhat Agree for this item to show you are paying attention." From the full sample of 214 participants, 208 provided the correct answer (4 selected Agree, 1 Disagree, and 1 Somewhat Disagree). Because we did not include this as exclusion criteria in our preregistration, we did not exclude participants based on this item. However, the majority of participants were reading materials well enough to notice the instruction.

Religiosity*

To what extent do you consider yourself a religious person?

1	2	3	4
Not Religious At All	Slightly Religious	Moderately Religious	Very Religious

To what extent do you consider yourself a spiritual person?

1	2	3	4
Not Spiritual At All	Slightly Spiritual	Moderately Spiritual	Very Spiritual

I try hard to carry my religious beliefs over into all my other dealings in life.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

When faced with a tragic event I try to remember that God still loves me and that there is hope for the future.

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

I feel God's presence.

1	2	3	4	5	6
Never or almost never	Once in a while	Some days	Most days	Everyday	Many times a day

I find strength and comfort in my religion.

1	2	3	4	5	6
Never or almost never	Once in a while	Some days	Most days	Everyday	Many times a day

*scores on these items were standardized to make a six item scale

Arab Identification

Do you consider yourself to be Arab? Yes No (if participants said no, they skipped the following items)

1	2	3	4	5	6
Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree

I often think about the fact that I am Arab.

The fact that I am Arab is an important part of my identity.

Being Arab is an important part of how I see myself.

I feel a bond with Arabs.

I feel solidarity with Arabs.

I feel committed to Arabs.

I am glad to be Arab.

I think that Arabs have a lot to be proud of.

It is pleasant to be Arab.

Being Arab gives me a good feeling.

Included with this scale was the item: "Please select strongly disagree for this item to show you are paying attention." From the sample of 150 participants (those who indicated Arab ethnicity), 139 provided the correct answer (3 selected Disagree, 3 Somewhat Disagree, 1 Agree and 1 Strongly Agree). Because we did not include this as exclusion criteria in our preregistration, we did not exclude participants based on this item, however it is clear that the majority of participants were reading materials well enough to notice and follow the instruction. No conclusions change if participants are excluded based on this item.