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The Relationship Between the Perception of Economic Risks and Other Risks Measured in Different and Separate Environments

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Abstract

While studies that examined risk perceptions in various environments have been previously conducted, the relationship between risk perceptions measured in such environments had not been examined. Such a relationship, if found, may indicate that when one learns to identify risks in one environment, they may identify risks more easily and quickly in another.

This study examined the relationship between measures of risk perception in several separate environments. The findings suggest that when learning to identify and assess risks in a particular environment, one may better identify and assess risks in a similar environment – for example, learning to identify and assess risks while driving makes it easier to identify and assess risks when crossing a road. Conversely, the findings also indicate that learning to identify and assess risks in one environment does not make it possible to better identify and assess risks in a disparate environment – for example, learning to identify and assess risks while driving does not make it easier to identify and assess risks in a workplace environment. This may also suggest that while disparate environments such as the road environment and the workplace environment are perceived as two separate environments, the road environment is experienced as one single environment by both drivers and pedestrians.

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Introduction

In order to avoid possible accidents, both construction workers and drivers assess and identify risks while working or driving in the work environment or the road environment, respectively. There are, of course, other risks inherent to different environments, beyond the workplace or the road – for example, the risk one may take when buying stocks in the stock exchange – a risk of losing money rather than physical injury. Browsing the Internet may also entail some risks. Here, too, the risk is not a physical one – it may occasionally be economic, and may occasionally be a risk of a different kind – such as infringement of one's privacy.

Many studies have examined the risk perceptions of drivers and pedestrians in the road environment. In one study, for example, drivers were asked to assess and rate the level of risk when driving above the speed limit. Several variables were found to be associated with the drivers' perceived degree of risk – age and salary levels, for example (Dionne et al., 2007). Additionally, a negative relationship was found between risk estimates and the tendency to drive at high speeds (Brown & Cotton, 2003). Further studies that examined the risk perceptions of drivers found that most drivers evaluated their own chances of receiving a speeding ticket, or of being involved in an accident as a result of high-speed driving, as lower than those of other drivers (Delhomme et al., 2009). Another study found that among young drivers who participated in a program that included – among other things – a visit to an emergency room in order to see the results of road accidents, risk perceptions – and those associated with driving at high speeds in particular – were higher following the participation in the program. (Lanning et al., 2018).

Studies of risk perceptions among pilots are rarer, but it had been reported that when pilots were asked to rate the degree of risk involved in certain situations while driving and while flying – such as flying short distances when the weather is fine – more experienced pilots rated the situations as less dangerous in comparison to less-experienced pilots. Some relationships have also been found between the perception of risks while driving and the perception of risks while flying (Hunter, 2006).

Studies that have examined reports of risks at work and the perception of risks at work around the world are less rare. For example, in a study conducted in Brazil, employees of a gas drilling company reported chemical risks, physical risks, physiological risks, and biological risks. Self-reported risks were associated with the number of hours worked per week (duration on the job), where the higher the number of hours worked per week, the fewer risks that were reported (Cezar-Vaz et al., 2012). Another study conducted at a steel plant in India found that age and experience have no relationship with job-risk perception, and also found that workers who worked in different places in the factory perceived the job risks differently (Basha & Maiti, 2013). In a different type of study where an experiment was conducted, it was found that learning in a virtual reality work environment affected risk perception, resulting in higher risk judgments. This effect was found only on the judgment of probabilities for an accident, but not on the judgment of the severity of injuries as a result of an accident, in the event that an accident occurred. (Leder et al.. 2019).

Studies that examined health behavior have found that an increase in the judgment of the likelihood of illness (threat vulnerability) and the severity of illness (threat severity) increases the likelihood of adaptive intentions or of behaviors (Floyd et al., 2000). Further studies have also found a relationship between risk perception and behavior (Brewer et al., 2004) and it was found that people who reported a high perceived likelihood of getting sick were more likely to get

vaccinated against a disease. People who reported high perceived severity of a disease were more likely to get vaccinated against the disease (Brewer et al., 2007).

Various studies were conducted in various, separate environments – but the relationship between risk perceptions in these different environments had not been examined. Such a relationship, if found, may indicate that when one learns to identify risks in one environment, they may identify risks more easily and quickly in another. Thus, a more experienced driver who has been driving for many years may identify risks more easily when crossing a road on foot, thanks to the experience they had gained as a driver. Additionally, two seemingly separate environments may also be experienced as a single environment rather than two separate ones. For example, it is possible that the environment when driving a vehicle or crossing a road is experienced as a single “road environment” rather than as two separate environments – i.e., a “driving” environment when driving a vehicle and a “pedestrian” environment when crossing the road. Even in this manner of situation, there should be a relationship between the perception of risks while driving and the perception of risks when crossing the road. Evidence that the road environment and the flight environment, for example, are experienced as one environment – or that risks can be better identified in one environment if we have learned to identify risks in another environment – has been demonstrated in a study that found several associations between risk perception while driving and risk perception while flying (Hunter, 2006).

It had been demonstrated that an activity learned in one environment (or domain) may be performed more easily and quickly in a new environment (Barnett & Ceci, 2002) – for example, learning to identify and assess risks while driving may allow one to better identify and assess risks when crossing a road. Similar new findings have also been demonstrated in a recent study (Ratzon et al., 2021) – however, these findings may suggest instead that drivers and pedestrians perceive the road as a single environment and conduct themselves on the road accordingly, as other findings in the same study indicated that – as recently argued – an activity learned in one environment may not be quicker and more efficient to perform in a new environment merely because it had been learned in that previous environment alone. For example, identifying risks while driving is a skill learned in the context of the activities of driving, and one should re-learn to identify risks when approaching a new situation, such as while performing construction work.

This study examined the relationship between risk perceptions in several environments. Such a relationship may indicate that learning to identify risks in one environment may make it possible to identify risks more easily and quickly in a new environment. A negative relationship would indicate interference when moving between the two environments. Study participants were asked to assess and rate the risks involved in several situations. They were asked to assess and rate the risks involved in buying stocks in the stock exchange, the risks involved in different situations when crossing a road, while driving and during a pandemic.

Method

Participants

Five groups participated in the study. The first group consisted of 23 participants, 9 of whom were women. The participants' ages ranged from 24 to 40 (mean = 31.08, standard deviation = 4.28). The second group consisted of 23 participants, 8 of whom were women. The participants' ages ranged from 26 to 66 (mean = 35.30, standard deviation = 11.15). The third group consisted of 41 participants, 9 of whom were women. The participants' ages ranged from 20 to 53 (mean = 34.36, standard deviation = 7.11). The fourth group consisted of 46 participants, 17 of whom were women. The participants' ages ranged from 18 to 84 (mean = 35.03, standard deviation = 15.87). The fifth group consisted of 32 participants, all of whom were men. The participants' ages ranged from 18 to 45 (mean = 31, standard deviation = 7.35).

Instruments

Several questionnaires were used. A demographic questionnaire included questions about age, gender, whether the participant has a driver's license and the number of years the participant has had a driver's license. The second questionnaire is the Risk Perception Questionnaire. In this questionnaire, a variety of situations from different fields were presented and the participant was asked to indicate each situation's degree of risk on a 7-point Likert scale (see Appendix). The questions were based on existing questionnaires. The risk perception questionnaire for drivers is based on the Driving Behavior Questionnaire (DBQ) (Reason et al., 1990). The questionnaire on risk perception when crossing a road is based on a Pedestrian Behavior Scale (PBS) (Granié et al., 2013). Additional questions were written based on a risk perception questionnaire for construction workers (Perlman et al., 2014).

Procedure

The participants in the study were undergraduate and graduate students at universities and colleges in Israel who volunteered to fill out the questionnaire. Non-students who volunteered to fill out the questionnaire had also participated. The e-questionnaire was sent to participants by e-mail.

Results

First, the relationships between measures (the averages of all questions in the questionnaires for each participant) in the first group were examined. The relationships examined were those between the measures in the questionnaire regarding risk perception while driving, the measures in the questionnaire regarding risk perception when crossing a road, the measures in the questionnaire regarding risk perception while buying stocks in the stock exchange, and the parameters of age and driving seniority (number of years for which a driver has had a driver's license). These relationships are presented in Table 1. The reliability (Cronbach's Alpha) for the measure of risk perception while driving was 0.943, the reliability for the measure of risk perception while crossing a road was.9480 and the reliability of the measure of risk perception when buying stocks was.7840.

Table 1. *The Relationships Between the Variables*

Variables	1	2	3	4
1. Risk perception when crossing a road				
2. Risk perception while driving	.873**			
3. Risk perception when buying stocks	.661**	.588**		
4. Age	111.-	024.	032.-	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

A regression analysis was conducted to examine the relationships between the measures. The regression model is significant and explains 76.8% of the variance (adjusted R-squared=.768), F (4, 22) =19.224, p<.001. Table 2 presents the values of the regression analysis.

The findings indicate that there is a relationship between the measure of risk perception when crossing a road, the measure of risk perception while driving, and the number of years for which a driver had been driving. No relationship has been found between the measure of risk perception when crossing a road and the measure of risk perception when buying stocks. These findings indicate that there is a relationship between the perception of risks while driving and the perception of risks when crossing a road, while the relationship between risk perception when crossing a road and risk perception when buying stocks is small and not significant. This relationship between risk perception when driving and risk perception when crossing a road may indicate that knowledge learned in one environment can be used when in a new environment. It is also possible that the road environment is perceived as one environment and not as two distinct environments.

Table 2. *The Relationship Between the Average Risk Perception when Crossing a Road (Dependent Variable), the Average Risk Perception while Driving (Score in the Risk Perception while Driving Questionnaire), the Average Risk Perception when Buying Stocks (Score in the Risk Perception when Buying Stocks Questionnaire), Age and Sex (N=23).*

Variables	B	Std. Error	Beta	T	Sig.
Risk perception while driving	.784	.153	.752	5.118	.000
Risks perception when buying stocks	.351	.216	.215	1.627	.121
Age	-.039	.034	-.124	-1.123	.276
Sex	-.015	.334	-.006	-.046	.964

Next, the relationships between the measures in the second group were examined. The relationships examined were those between the measures in the questionnaire regarding risk perception while driving, the measures in the

questionnaire regarding risk perception when crossing a road, the measures in the questionnaire regarding risk perception when buying stocks in the stock exchange, age and driving seniority. These relationships are presented in Table 3. Cronbach's Alpha for the measure of risk perception while driving was 0.887, Cronbach's Alpha for the measure of risk perception when crossing a road was 0.916, and Cronbach's Alpha for the measure of risk perception when buying stocks was 0.914.

Table 3. *The Relationships Between the Variables*

Variables	1	2	3	4	5
1. Risk perception when crossing a road					
2. Risk perception while driving	.873**				
3. Risk perception when buying stocks	.503*	.490*			
4. Driving seniority	.187	.223	.115		
5. Age	277.	.294	.207	.955**	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

A regression analysis was conducted to examine the relationships between the measures. The regression model is significant and explains 75.7% of the variance (adjusted R-squared=.757), F (5, 22) =14.683, p<.001. Table 4 presents the values of the regression analysis.

Here, too, the findings indicate that there is a relationship between the measure of risk perception when crossing a road, the measure of risk perception while driving and the number of years for which a driver had been driving – and no relationship was found between the measure of risk perception while crossing a road and the measure of risk perception index when buying stocks. As said, these findings indicate that there is a relationship between the perception of risks while driving and the perception of risks when crossing a road, while the relationship between risk perception when crossing a road and risk perceptions when buying stocks is small and not significant. This relationship between risk perception while driving and risk perception while crossing a road may indicate that knowledge learned in one environment can be used when in a new environment. It is also possible that the road environment is perceived as one environment and not as two distinct environments.

Table 4. *The Relationship Between the Average Risk Perception when Crossing a Road (Dependent Variable), the Average Risk Perception while Driving (Score in the Risk Perception while Driving Questionnaire), the Average Risk Perception when Buying Stocks (Score in the Risk Perception when Buying Stocks Questionnaire), the Number of Years with a Driver's License (Driving Seniority), Age and Sex (N=23).*

Variables	B	Std. Error	Beta	T	Sig.
Risk perception while driving	.915	.144	.791	6.335	.000
Risk perception when buying stocks	-.001	.139	-.001	-.008	.994
Driving seniority	-.003	.034	-.034	-.086	.932
Age	.007	.036	.081	.206	.839
Sex	-.476	.263	-.230	-1.812	.088

Next, the relationships between the measures in the third group were examined. Here, too, the relationships examined were those between the measures in the questionnaire regarding risk perception while driving, the measures in the questionnaire regarding risk perception when crossing a road, the measures in the questionnaire regarding risk perception when buying stocks in the stock exchange, age and driving seniority. These relationships are presented in Table 5. Cronbach's Alpha for the measure of risk perception while driving was 0.827, Cronbach's Alpha for the measure of risk perception while crossing a road was 0.904, and Cronbach's Alpha for the measure of risk perception when buying stocks was 0.609.

Table 5. *The Relationships Between the Variables*

Variables	1	2	3	4	5
1. Risk perception when crossing a road					
2. Risk perception while driving	.762**				
3. Risk perception when buying stocks	.057	.204			
4. Driving seniority	.249	.170	.198		
5. Age	271.	.357*	.268	.768**	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

A regression analysis was conducted to examine the relationships between the measures. The regression model is significant and explains 75.7% of the variance (adjusted R-squared=.757), F (5, 22) =14.683, p<.001. Table 6 presents the values of the regression analysis.

Once again, the findings indicate a relationship between the measure of risk perception when crossing a road, the measure of risk perception while driving and the number of years for which a driver had been driving, and no relationship was found between the measure of risk perception when crossing a road and the measure of risk perception when buying stocks.

Table 6. *The Relationship between the Average Risk Perception when Crossing a Road (Dependent Variable), the Average Risk Perception while Driving (Score in the Risk Perception while Driving Questionnaire), the Average Risk Perception when Buying Stocks (Score in the Risk Perception when Buying Stocks Questionnaire), the Number of Years with a Driver's License (Driving Seniority), Age and Sex (N=41).*

Variables	B	Std. Error	Beta	T	Sig.
Risk perception as a driver	.913	.133	.804	6.846	.000
Risk perception when buying stocks	-.220	.195	-.124	-1.126	.268
Driving seniority	.028	.016	.292	1.772	.085
Age	-.027	.021	-.221	-1.264	.215
Sex	-.104	.226	.804	-.462	.647

Next, the relationships between the measures in the fourth group were examined. The relationships examined were those between the measures in the questionnaire regarding risk perception while driving, the measures in the questionnaire regarding risk perception when crossing a road, and the measures in the questionnaire regarding risk perceptions during the COVID-19 pandemic, age and driving seniority. These relationships are shown in Table 7. Reliability (Cronbach's Alpha) for the measure of risk perception while driving was 0.885, Cronbach's Alpha for the measure of risk perception when crossing a road was 0.921, and Cronbach's Alpha for the measure of risk perceptions during the COVID-19 pandemic was 0.955.

Table 7. *The Relationships Between the Variables*

Variables	1	2	3	4	5
1. Risk perception when crossing a road					
2. Risk perception while driving	.639**				
3. Risk perception during a pandemic	.402*	.512**			
4. Driving seniority	.202	-.183	.109		
5. Age	.466*	.128	.231	.548**	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

A regression analysis was conducted to examine the relationships between the measures. The regression model is significant and explains 46.7% of the variance (adjusted R-squared=.467), F (5, 25) =5.383, p<.01. Table 8 presents the values of the regression analysis.

As before, the findings indicate that that there is a relationship between the measure of risk perception while crossing a road, the measure of risk perception while driving and the number of years for which a driver had been driving – and no relationship was found between the measure of risk perception while crossing a road and the measure of risk perception during a pandemic.

Table 8. *The Relationship Between the Average Risk Perception when Crossing a Road (Dependent Variable), the Average Risk Perception while Driving (Score in the Risk Perception while Driving Questionnaire), the Average Risk Perception During a Pandemic (Score in the Risk Perception During a Pandemic Questionnaire), the Number of Years with a Driver's License (Driving Seniority), Age and Sex (N=25).*

Variables	B	Std. Error	Beta	T	Sig.
Risk perception while driving	.786	.230	.626	3.415	.003
Risk perception during a pandemic	-.014	.148	-.018	-.096	.924
Driving seniority	.014	.016	.163	.832	.415
Age	.020	.012	.305	1.676	.109
Sex	-.072	.379	-.033	-.189	.852

Finally, the relationships between the measures in the fifth group were examined. The relationships examined were those between the measures in the questionnaire regarding risk perception questionnaire while driving, the measures in the questionnaire regarding risk perception while riding a motorcycle, the measures in the questionnaire regarding risk perception during other activities, age and driving seniority for both automobiles and motorcycles. These relationships are presented in Table 9. Reliability (Cronbach's Alpha) for the measure of risk perception while driving was 0.857, Cronbach's Alpha for the measure of risk perception while riding a motorcycle was 0.942, and Cronbach's Alpha for the measure of risk perception during general activities was 0.892.

Table 9. *The Relationships Between the Variables*

Variables	1	2	3	4	5	6
1. Risk perception while riding a motorcycle						
2. Risk perception while driving	.844**					
3. General risk perception	.517**	.548**				
4. Driving seniority	-.306	-.179	-.141			
5. Driving seniority as a motorcyclist	-.424*	-.244	-.090	.793**		
6. Age	-.289	-.209	-.078	.788**	.740**	

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

A regression analysis was conducted to examine the relationships between the measures. The regression model is significant and explains 73.1% of the variance (adjusted R-squared=.731), F (5, 31) =17.849, p<.001. Table 10 presents the values of the regression analysis.

The findings indicate that there is a relationship between the measure of risk perception while driving an automobile, the measure of risk perception while riding a motorcycle and the number of years driving and riding motorcycles – and no relationship was found between the measure of risk perception while riding a motorcycle and the measure of risk perception for general activities.

Table 10. *The Relationship Between Average Risk Perception when Riding a Motorcycle (Dependent Variable), the Average Risk Perception while Driving an Automobile (Score in the Risk Perception while Driving Questionnaire), the Average Risk Perception in General Activities (Score in the Risk Perception in General Activities Questionnaire), the Number of Years with a Driver's License (Driving Seniority) for both Automobiles and Motorcycles, and Age (N=25).*

Variables	B	Std. Error	Beta	T	Sig.
Risk perception while driving	.852	.134	.738	6.374	.000
General risk perception	.088	.107	.093	.824	.418
Driving seniority (automobile)	.002	.022	.018	.102	.919
Driving seniority (motorcycle)	-.040	.020	-.322	-1.969	.060
Age	.013	.021	.097	.604	.551

Discussion

This study found a relationship between risk perception while driving an automobile and risk perception when crossing a

road, suggesting that the ability to identify and assess risks when crossing a road is related to the ability to identify and assess risks while driving. In addition, a relationship was found between the risk perception while driving an automobile and risk perception while riding a motorcycle. Suggesting that the ability to identify and assess risks when driving a motorcycle is related to the ability to identify and assess risks when driving an automobile. These findings may indicate that training to perform a particular task in a particular environment may lead to improved performance of the same task in a different environment – for example, if one learns to identify and assess risks while driving, it will be easier for them to identify and assess risks when crossing a road, or riding a motorcycle.

However, no relationships had been found between the perception of risks while crossing a road and the perception of risks when buying stocks, or the perception of risks during a pandemic. Additionally, no relationship had been found between the perception of risks when riding a motorcycle and the perception of risks in general activities. These findings indicate that one's ability to identify and assess risks when crossing a road does not improve if one had learned to better identify and assess risks when buying stocks, or during a pandemic, and one's ability to identify and assess risks while riding a motorcycle does not improve if one had learned to better identify and assess risks in general activities. In contrast to the findings pertaining to risk perception when crossing a road and while driving, or while driving an automobile and riding a motorcycle, these findings suggest that when learning to assess and identify risks in one environment, risks cannot be better identified and assessed in a separate environment as a result of that training. It therefore may be that the relationships found between risk perceptions when driving, crossing roads, and riding a motorcycle indicate that the road environment is experienced and perceived as one single environment for all road users rather than several separate environments for pedestrians, drivers and motorcyclists. According to this approach, the relationships between the risk perceptions when driving an automobile, crossing a road and riding a motorcycle are not a result of training to perform one activity in one environment leading to an improvement in performing the same activity in a separate environment – but rather, because the activity was learned in a particular environment (i.e. the road environment) and then carried out in a similar situation within the same environment.

It had been previously suggested that a sequence of actions is learned as a set of discrete actions, in a similar manner to the way information is transmitted online as discrete packets along separate routes, allowing for greater flexibility when transferring information from sender to receiver – and thus, an individual learning a sequence of actions in one particular environment should be capable of performing individual actions that are a part of the sequence more quickly and efficiently in a different environment, compared to actions that had never been learned before. There is, however, an opposite approach which suggests that when learning a sequence of actions, it is treated as a single unit and any action in the sequence is locked into the context that it had been learned in – and thus, learning to perform a particular action in a particular context shall not make it possible to perform the same action more efficiently under a different context (Perlman et al., 2010).

As noted, this study found relationships between risk perceptions in the road environment, but not between risk perceptions between the road environment and environments that may be perceived as distinct and separate from it, such as a workplace environment (where an employee must identify risks while working), the economic environment (where an investor must identify risks while buying stocks on the stock exchange), or the digital environment, where a user may be

exposed to financial and other risks. Thus, for example, no relationship had been found between risk perception while crossing a road and risk perception during a pandemic, or risk perception in the workplace environment. This suggests that, as had been recently argued (Ratzon et al., 2021), the sequence of actions performed while crossing a road is performed as a single unit – and thus, when learning to identify risks while crossing a road, this activity is performed in the context of crossing a road, as part of the road-crossing activity – and one should therefore re-learn this activity in a new context when learning to identify risks as part of a new activity, such as when identifying risks during a pandemic, or in a workplace environment.

And one last word about the digital environment. What demonstrates the importance of the digital environment is the use of a metaphor for this environment to explain reality (see for example Fields et al., 2018). The exposure of the users to the digital environment also allows them to understand this metaphor. (See Appendix). The Internet and the digital environment is a relatively new environment where one is exposed to various risks – in this environment one may be exposed, for example, to various economic risks, harassment or cyberbullying.

Appendix

Questionnaire regarding risk perception while driving: In your opinion, what is the level of risk for/of the situations below? (Rate from 1-7)

Driving in reverse at high speed
Driving when blood alcohol levels are above the levels permitted by law
Honking at another driver
Not checking the mirrors before leaving a parking space or changing lanes
Braking too fast / too hard on a slippery road
Leaving a junction in a way that a forces a driver with the right of way to stop to allow one to pass
Ignoring the speed limit on an urban road / in a built-up area
Getting confused while operating switches in the car (e.g., flipping the light switch instead of the wiper switch)
Ignoring a yield sign and not yielding the right of way
Starting to drive in third gear while leaving a traffic light
Trying to overtake a vehicle without noticing that it signaling a right turn
Getting mad at another driver and chasing them to scold them
Overtaking a slow vehicle
“Sticking” to the vehicle in front in a way that will make it difficult to stop safely when making an emergency stop
Running a yellow light
Immersing oneself in thoughts while driving to an extent of not paying attention to a section of the road
Ignoring the speed limit on a highway

Questionnaire of risk perception while walking on the street, what do you think is the level of risk of the situations below? (1-7)

Starting to cross at the crosswalk and finishing by walking diagonally to save time
Crossing a road between vehicles standing in a traffic jam
Crossing a road between parked vehicles
Watching the traffic light (for oncoming vehicles) and starting to cross as soon as it turns red
Crossing the road even when the light is still red on the traffic light for pedestrians
Crossing a road diagonally to save time
Crossing away from a crosswalk even if there is one less than 50 meters away
On a two-way street, crossing the first section of the street and waiting in the middle of the road to cross the second section
Crossing a road while talking on a cell phone or listening to music using earbuds
Crossing a road even when the light is still green on the traffic light for oncoming vehicles
Starting to crossing a road, but running the rest of the way to avoid passing vehicles
Crossing a road without looking, i.e., following other people currently crossing a road.
Walk through passages where pedestrians are not allowed to save time
Crossing a road very slowly to annoy a driver
Forgetting to look before crossing due to thinking of something else
Crossing without looking due to talking to someone
Forgetting to look before crossing due to wanting to join someone who is on the sidewalk on the other side
Running and crossing the street without looking, due to being in a hurry

Here are some stocks and their rise and fall patterns according to the Tel Aviv 35 Index. (The stocks will not be referred to by their original names, so as not to make contexts).

For example: When the pattern of changes to the stock in recent months is a 13% rise in the first month, a 13% fall in the second, a 17% in the third, a 12% fall in the fourth, a 10% rise in the fifth and a 21% fall in the last, this constitutes a pattern of sharp falls and rises. However, when the pattern of changes to the stock in recent months is a 1% rise in the first month, a 3% rise in the second, a 1% rise in the third, a 4% rise in the fourth, a 1% rise in the fifth and a 3% percent rise in the last, this is a stable and moderate pattern of rises.

What is the risk level for a sharp fall in the coming month for the following stocks? (1 – No risk of fall or possible rise, 7 – High risk of fall)

Pattern of changes in half a year (more or less):

A pattern of moderate falls over 5 months
A pattern of sharp rises over 10 months
An unstable pattern of sharp falls and rises over 15 months
A pattern of moderate falls and rises over 15 months
A pattern of moderate falls over 17 months
A pattern of sharp falls over 15 months
A pattern of very sharp falls over 5 months
A pattern of very sharp rises over 5 months
A pattern of moderate falls over 5 months followed by moderate rises over 5 months
A pattern of moderate rises over 5 months followed by moderate falls over 5 months
A pattern of sharp falls over 5 months followed by moderate rises over 5 months
A pattern of sharp declines over 7 months followed by sharp rises over 7 months
A pattern of no change over 25 months
A pattern of no change over 5 months
No change over 5 months followed by a pattern of sharp falls over 5 months
No change over 10 months followed by a pattern of sharp rises over 10 months
A pattern of no change over 12 months

Questionnaire regarding risk perception while riding a motorcycle

In your opinion, what is the level of risk for/of the situations below? Do not linger too long on each sentence, but answer in accordance with how you are feeling while filling out this questionnaire (Rate from 1-7)

Riding without a helmet
Ignoring the speed limit in a urban road
Braking abruptly
Riding under the influence of drugs
Riding at night
Zigzagging between automobiles on the road without signaling
Entering a one-way street at a “No Entry” sign
Using a mobile phone without a compatible headset while driving
An oil stain on the road
Riding in pouring rain
Entering a truck or a bus’s blind spot
Riding where motorcycles are prohibited in order to save time
A cyclist or a pedestrian going onto the road unexpectedly
A parked vehicle’s driver door opening unexpectedly
An unexpected vehicle moving into the path of the motorcycle
Riding in sharp turns and sharp curves
Riding in sharp turns and sharp curves at high speed
Obstacles in the right shoulder of the road
A vehicle in front of you braking suddenly
Not enough air pressure in the tires
Riding in cold weather

General Risk Perception Questionnaire

In your opinion, what is the level of risk for/of the situations below? Do not linger too long on each sentence, but answer in accordance with how you are feeling while filling out this questionnaire (Rate from 1-7)

Replacing an electric lightbulb
Climbing to the roof for repairs
Performing electrical repairs (when you are not a qualified electrician)
Entering the shower room when the floor is wet
Running down the stairs
Forgetting the gas on
Working with sharp tools without protective gloves
Having full sexual intercourse without a condom (with a casual partner)
A gas leak
Carrying a heavy weight
Young people playing with guns
Hammering a nail into a wall
Skydiving
Working near exposed wires on an electrical panel
Performing gardening work without shoes

In your opinion, what is the level of risk for/of the situations below during the COVID-19 pandemic? (Rate from 1-7)

A prolonged stay (over 15 minutes) with a person (patient) with verified COVID-19 infection?
Walking on the street without a mask at the present time
Staying near a patient with COVID-19 with a mouth and nose mask
Staying at the home of your nuclear family without a mask
Being at work (in the office) with other people without a mask and without any protective equipment
Staying at work (in the office) without other people without a mask and without any protective equipment
Staying indoors with a crowd of people while wearing a non-standard mask
Staying indoors without other people present while wearing a non-standard mask
Staying indoors next to a person who does not wear a mask at all
Working next to a colleague who wears an improvised mask
Working with a crowd of people, some of whom wear improvised masks
Working in a place without protective equipment against infection (such as partitions for protection, etc.)
Working where masks need to be removed (such as at dentists' clinics)
Working with colleagues who do not wear masks
Working in a place where protective measures are not enforced
Working in a place with a lot of people who return from abroad (such as Ben Gurion Airport)
Coming down with COVID-19
Working in the vicinity of individuals with suspected COVID-19 infections (such as hospitals)
When a patient with confirmed COVID-19 infection is in your vicinity and is not meticulous about isolation
When a patient with confirmed COVID-19 infection is in your vicinity and is meticulous about isolation
Working in a laboratory conducting COVID-19 tests

The digital environment as a metaphor for reality

According to this approach (see also Perlman, 2023), the language that is usually used to describe reality is not the correct language and the concepts that are used, such as concepts of space, time and physical objects, are not the correct concepts. The terms of a database or software and of space and time experienced by data structures or virtual machines (Virtual Machines) and the parameters of the location of objects and of time must be used. Thus, an object moves in space and time changes when parameter of space and time change and the viewer's experience is of object movement and time passing. The data is processed by data structures for the experience of space and time, that is, data structures within the database, process the data stream and the parameters.

According to this approach, data structures experience subjective reality as space and time. But what is objective reality? According to the accepted theory, the experience results from the activity of neurons. Space and time according to the accepted theory are the objective reality. According to such an approach, a conscious experience is created from unconscious elements (objects in space and time). But as mentioned, according to another theory, the experience of space and time arises from a database when parameters of space and time are processed by data structures.

There may be consequences for this metaphor (and also when taking into account the probabilistic behavior of particles).

The probabilistic behavior of a stimulus may affect the reaction times to the stimulus if indeed the presented object exists in probability and therefore will be experienced in probability. It is known that an object is recognized more slowly if it appears shortly after the same object that appeared in the same place (inhibition of return). It is possible that this object appears with a smaller probability for a short period of time after the appearance of the first object and that is why the response time to this object is slower. As another example, information (between synchronized particles) may travel in no time. It is possible that this may explain phenomena such as telepathy or the feeling of a person being watched, even when he does not see the viewer.

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