

Effects of Rhetorical Strategies and Skin Tones on Agent Persuasiveness in Assisted Decision-Making: Supplementary Materials

Amama Mahmood
amahmo11@jhu.edu
Johns Hopkins University
Baltimore, Maryland, USA

Chien-Ming Huang
chienming.huang@jhu.edu
Johns Hopkins University
Baltimore, Maryland, USA

A VERIFICATION OF AVATAR APPEARANCE

We used two checks to verify if the agents' skin tone and gender were perceived as intended.

- *The agent's skin tone appears to be:* 1 – Absolutely black, 2 – Somewhat black, 3 – Neither black nor white, 4 – Somewhat white, or 5 – Absolutely white.
- *The agent's gender appears to be:* 1 – Absolutely female, 2 – More female than male, 3 – Neither female nor male, 4 – More male than female, or 5 – Absolutely male.

B DESERT SURVIVAL RANKING ALGORITHM

The agent used the ranking algorithm below in the Desert Survival Task.

Participant Rank: 1, 2, 3, 4, 5, 6, 7, 8, 9

Agent Rank: 5, 6, 1, 2, 3, 8, 4, 9, 7

According to the above one-to-one matching, the fifth item on the participant's ranked list would always be first on the AI agent's list, sixth item would be second, first would be third and so on.

C DESERT SURVIVAL TASK

C.1 Task Description

Following description was given to the participants:

"It is approximately 10 a.m. in mid-August and you have just crash landed in a desert in New Mexico, US. Only 10 of you were able to survive. The plane, containing the bodies of the pilots and rest of the crew, has completely burned. Only the air frame remains. None of the rest of you are injured. Before the plane caught fire, your group was able to salvage 9 items in good condition. The pilot was unable to notify anyone of your position before the crash, however, he had indicated that you were 70 miles S/SW from a mining camp which is the nearest known habitation, and that you were approximately 65 miles off course. The last weather report indicated that the temp would reach 110 that day, which means that at ground level it will be almost 130. You are dressed in light weight clothing: short sleeved shirts, pants, socks and street shoes.

Before the plane caught fire, your group was able to salvage 9 items in good condition. Your task is to rank these items according to their importance to your survival, with 1 being the most important and 9 being the least important."

C.2 Script for AI Agent

Table 1: Design of Linguistic Cues of Expertise

Item	Expert Speech Strategy	Novice Speech Strategy
A map of New Mexico	<p>Advantages: Map will be useful to start a fire with. It can be used as toilet paper. You can also use it as a shade for your head to avoid exposure to direct sunlight.</p> <p>Disadvantages: Map is not as useful as one would think because it will encourage you and others to try and walk out. It is potentially dangerous to leave the site of crash since rescue party will most likely arrive there.</p>	<p>Advantages: Map can be used to start a fire, Ummm, as a toilet paper I think and to cover head.</p> <p>Disadvantages: Map is not as good as people think, Ummm, because I think it may make people want to leave that place.</p>
The book - Edible Animals of the Desert	<p>Advantages: If you are stuck beyond day 3, you will need to find food and water. Additionally, you will be able to use the pages of book as toilet paper and as a fire starter.</p> <p>Disadvantages: This book will be of little use since the main problem you confront for first few days is dehydration, not starvation. Also, you should be thinking about conserving energy and hunting is counterproductive.</p>	<p>Advantages: The book may be used to search for food, to start a fire And, And, like..... a toilet paper.</p> <p>Disadvantages: The book is not useful because people should save their energy by not hunting And, And like..... people do not even need food really.</p>
A pair of sunglasses per person	<p>Advantages: The intense sunlight of desert may cause Photokeratitis due to sun reflection from sand. It is like having sunburned eyes. This will be prevented by wearing a pair of sunglasses.</p> <p>Disadvantages: Sunglasses will prevent sunburned eyes, but its usefulness is limited to daytime. Additionally, it is replaceable by any piece of clothing that you are wearing to keep your eyes safe from exposure to sunlight.</p>	<p>Advantages: People may avoid Ummm, sunlight by wearing sunglasses..... I guess. So that eyes don't burn.</p> <p>Disadvantages: People may avoid Ummm, sunlight by wearing sunglasses..... but only during the day I guess. No use at night.</p>
A first aid kit	<p>Advantages: You may use gauze as rope or for protecting your exposed body parts against dehydration and sunlight. In case of injury, it will be useful to have a first aid kit.</p> <p>Disadvantages: Since no one was injured in the plane, a first aid kit is not as important as one would think. Because of low humidity of the desert, it is considered one of the least infectious places in the world. Also, because the blood thickens due to dehydration, there is little danger of bleeding. However, gauze can be used for secondary purposes.</p>	<p>Advantages: People may use gauze as rope, I suppose And, And as sun protection or may be in case they get hurt.</p> <p>Disadvantages: No body is hurt so no need of first aid thing. There is little chance of getting hurt in the desert. And, And people can use gauze for other reasons, I suppose.</p>
A cosmetic mirror	<p>Advantages: Cosmetic mirror is one of the most powerful tools to communicate your presence because reflected sunbeam can be seen from a far-off distance. It gives you higher chance of being spotted within 24 hours. Speedy discovery is crucial to survival of your group.</p>	<p>Advantages: The shiny surface of the magnetic compass may be used to signal for help. Later if no help comes, hmmm I don't know..... people can navigate with it.</p>

Continued on next page

Table 1 – continued from previous page

Item	Expert Speech Strategy	Novice Speech Strategy
	<p>Disadvantages: You may use cosmetic mirror to communicate your presence during daylight. Apart from that it has no secondary use for your survival.</p>	<p>Disadvantages: Cosmetic mirror can reflect sunlight but only in the daylight.... Ummm, that's it. No other use.</p>
<p>A flashlight of four battery size</p>	<p>Advantages: Flashlight is the only quick reliable device for signaling your presence at night. It will help you see at night and stay safer. Additionally, if you remove the batteries, it can be used as a container for digging or collecting water. The reflector and lens can be used as auxiliary signaling device and as a fire starter.</p> <p>Disadvantages: You will use flashlight to communicate your presence at night. However, its range will be limited, and it may attract dangerous animals wandering in the dark.</p>	<p>Advantages: People may use flashlight to seek help at night and see in the dark. What else? What else? Oh, it may be used as a container, signaling device and fire starter.</p> <p>Disadvantages: People may use flashlight to seek help at night, what else what else? but oh, it may bring dangerous animals out too.</p>
<p>A magnetic compass</p>	<p>Advantages: The reflective surface of the magnetic compass can be used as an auxiliary signaling device. In later days, if no help arrives, it will help you navigate.</p> <p>Disadvantages: Aside from the possibility of using the reflective surface of the magnetic compass as an auxiliary signaling device, it is of little use. It will tempt you to walk in search of food or water which is not good.</p>	<p>Advantages: The shiny surface of the magnetic compass may be used to signal for help. Later if no help comes, hmmm I don't know... people can navigate with it.</p> <p>Disadvantages: Apart from using the shiny surface of the magnetic compass to signal, no use. Hmmm. I don't know.... People will go to look for food and water with that compass. That isn't a good idea.</p>
<p>A 2 quart flask 180-proof vodka</p>	<p>Advantages: Since 180-proof vodka is flammable, you can use it to start a fire. Moreover, the empty bottle may be used to collect water. Even if you do not drink vodka to avoid dehydration, it can be used otherwise.</p> <p>Disadvantages: Drinking alcohol causes quicker dehydration because your body will lose enormous amounts of water trying to digest alcohol. 2 to 3 ounces of water is required to digest one ounce of alcohol approximately. Even though it may have secondary uses such as starting a fire and using empty bottle as container, drinking vodka will be lethal in this situation.</p>	<p>Advantages: Vodka can catch fire. Ummm, People can put water in empty bottle. Yeah. That's all.</p> <p>Disadvantages: Ummm, I mean drinking alcohol feels good, but it will make people lose water in their body. Not good. I guess people could use it for starting a fire or storing water. Yeah. That's all.</p>
<p>A plastic raincoat per person</p>	<p>Advantages: Ironically, Coats are one of the best ways to avoid hot dry air from circulating next to your skin. Hence, preventing perspiration. This will help you prevent dehydration through moisture loss. Therefore, increasing your survival time. Plastic raincoat can also be used to gather dew at night for drinking purposes. You will also be able create a solar still using raincoat to extract some water from ground.</p>	<p>Advantages: You know coats stop dry air to prevent sweating. That means less dehydration. Ummm, Like people can gather dew at night to drink and they can suck water out of ground by making solar still with the coat.</p>

Continued on next page

Table 1 – continued from previous page

Item	Expert Speech Strategy	Novice Speech Strategy
	<p>Disadvantages: By digging a hole and placing the raincoat over it, a solar still can be constructed to obtain water. However, this will give you very little water compared to the effort you put in digging the hole. Hence, it will not significantly increase your chances of survival.</p>	<p>Disadvantages: People can gather dew at night to drink and Ummm, they can suck water out of ground by making solar still. But..... that's like too much work for so little water. Not that good for staying alive.</p>