

REASERCH OF THE DIFFERENT EMOTION IN DIFFERENT DRIVING PURPOSE AND POSITION IN CAR

Chia-Lin Yang^a, Min-Yuan Ma^a

^a National Cheng Kung University, Taiwan

ABSTRACT

Nowadays, people rely on automobiles by means of transportation day by day. The moods initiated in the vehicle often affect the experience of the ride and even following activities. Suitably changing the disposition and atmosphere in the vehicle would not only reduce the disturbance of negative moods, but also provoke and maintain positive moods as well. Aiming at common emotions that may occur in the vehicle, this research discusses the relation and tendency of different emotions under different driving goals and different sitting positions. Based on the research between different riding conditions and emotions correspondingly, the investigation hypothesis is as follows: First, the riding condition divides into four kinds, the "commuting goal driver seat", the "commuting goal assistant seat", the "sightseeing goal driver seat", and the "sightseeing goal assistant seat". Second, the positive emotions are relief, enjoyment, joviality, excitement, contentment, jolliness, happiness, and satisfaction, with 8 in total, whereas the negative emotions are alarm, worry, uneasiness, dread, tenseness, uncomfortableness, anxiety, missing, nervousness, and torment, with 10 in total. Third, through the network questionnaire and by the use of Quantification theory type III, the different riding conditions and the mood corresponding relationships results are that: (1) if sorted by riding goals, you can obviously see the "sightseeing - centralism/commuting - dispersion" tendency; (2) if sorted by position, you can see "the driving - centralism/riding - dispersion" phenomenon.

Keywords: *Emotion, Cognition, Quantification Theory Type 3*

Chia-Lin Yang: 7F., No.146-30, Sec. 1, Dongshan Rd., Beitun Dist., Taichung City 406, Taiwan (R.O.C.); e-mail address: nikemai@msn.com

1. INSTRUCTION

Due to the rapid development of technology and society, the automobile has already risen from luxury goods to a daily necessity which every family can afford. At this point, the automobile has become the indispensable way of traveling, no matter if it's going to school or work everyday, or just a quick holiday to the countryside. Traveling by automobile, people can get to destinations in the shorter time which was not possible before. While people increase dependence on automobiles, the time in which people spend in the vehicle also increase, and also the diversity of moods initiated.

The emotion will affect person's thoughts as well as the ability to judge. Positive moods can enhance the power to judge and cause smoother working efficiency. Negative mood does the opposite. Emotion is a complex phenomenon which exists in people. It plays an important role in psychology, physiology, behavior, expression, expression posture, as well as interpersonal and cultural behavior. According to the mood cognition appraisal theory, the mood is initiated by stimulation. Emotion is aroused through cognitive evaluation of stimuli. But when the result of the event is irrelevant with the goal of the individual or personal happiness, no emotion is aroused. When the result of the event was recognized as beneficial to the individual, it initiates a positive mood. When the result of the event outputs pressure, then a negative mood is initiated(Lazarus, R. S., 1991).

But emotion is often affected and altered by previous events. In other words, when continuous events occur, the emotion initiated in an earlier event is likely to pass on to the events that follow. Individuals easily affected by emotion, or moody people, are affected all day by the mood initiated before leaving home. The mood persists until an event powerful enough to change the mood occurs. In daily life, the vehicle that leads us to event after event and between various destinations, is the automobile. When leaving the house every day for work, school or traveling destinations, the first space we get in contact with is the space within the vehicle. Therefore, the mood initiated in the vehicle, often affects the efficiency of processing following events when arriving at the destination.

However, will the emotions initiated in the vehicle affect each other? Are the emotions initiated in different situations not related at all? Therefore this research compares psychological factors (the goal of the ride) as well as physiological factors (the position of the seat) as the viewpoints to discuss whether people's mood differ according to the goal of the ride and the position of the seat whether they have a specific relations. We hope to provide a reference of how people may adjust their emotions while riding an automobile.

2. METHODOLOGY

In order to understand the various emotions aroused when traveling by automobile along with the way the emotions affect each other, this research uses the technique of conducting questionnaires and giving out surveys.

2.1. Emotion glossary screening

Many scholars attempt to classify different basic emotions and try to discover the basic combinations of emotions, such as Plutchik's(1994) eight mood prototype; Ortony, Clore & Collins's(1988) nine mood classification which is differentiated by the event, the reason and

the object; Shaver et al. hypothesized six kinds of basic prototypes. Finally, there is Lazarus's(1991) "cognition - motive - relations" mood theory pattern.

Because the research discusses how the spatial situation in the vehicle interacts with the goal of the ride, the ride acts as the event, the goal of the ride acts as the reason, the role of the rider acts as an object. We use the Ortony et al. mood classifications as the foundation, and chose 18 emotion glossaries (Table 1) to conduct the following questionnaire research.

Table 1: 8 positive and 10 negative emotion glossaries selected form Ortony et al. mood classifications

Positive		Negative	
relief	contentment	alarm	uncomfortable
enjoyment	jolliness	worry	anxiety
Joviality	Happiness	uneasiness	missing
excitement	satisfaction	dread	nervousness
		tenseness	torment

3. QUESTIONNAIRE

(1)Purpose: to find out if different group of people with different purpose and state would produce specific emotions

(2)Phrases: selected from the reference, 18 phrases are as the options with four situations: "commuting – driving/ commuting – riding/sightseeing - driving/ sightseeing - riding" as the topic item.

(3)Subjects: 62 driving-experienced volunteers from the internet.

(4)Quantification Theory Type 3: by the result of Quantification Theory Type 3 (Table 2), the first and the second axis were selected because of the highest representatives of the result as the X axis and the Y axis. Hence 18 emotion phrases were plotted (Figure 1~4).

Table 2: analysis result of Quantification Theory Type 3

	axis 01	axis 02	axis 03	axis 04
relief	-2.26054	0.50656	-0.61512	1.13877
jolliness	-2.13745	-0.24862	-1.04402	-0.14001
enjoyment	-1.24774	0.91802	0.28161	-1.28333
worry	0.01751	-1.6767	0.1165	-0.63568
dread	0.2716	-0.83208	-0.20707	1.47534
contentment	-0.02119	0.60078	1.06829	0.84933
alarm	-0.45911	-1.64482	0.08567	0.30737
happiness	-0.04815	1.09319	0.98793	-0.74565
excitement	0.30465	-0.1734	0.40632	-2.05081
joviality	0.48953	0.98142	0.93735	-0.2575
tenseness	0.45384	-1.60066	-0.07702	-0.84161
anxiety	0.8408	-0.23892	0.15118	-0.55321
satisfaction	0.05432	1.43448	1.25062	0.67439
uncomfortable	1.35539	1.29422	-2.38558	0.85507
missing	0.8351	-0.8358	0.72707	1.83871
nervousness	0.81944	0.22568	0.64473	0.69878
uneasiness	0.4479	0.66888	0.24626	-0.65437
torment	1.06297	0.49057	-2.43446	-0.64801

(5) Cartography analysis:

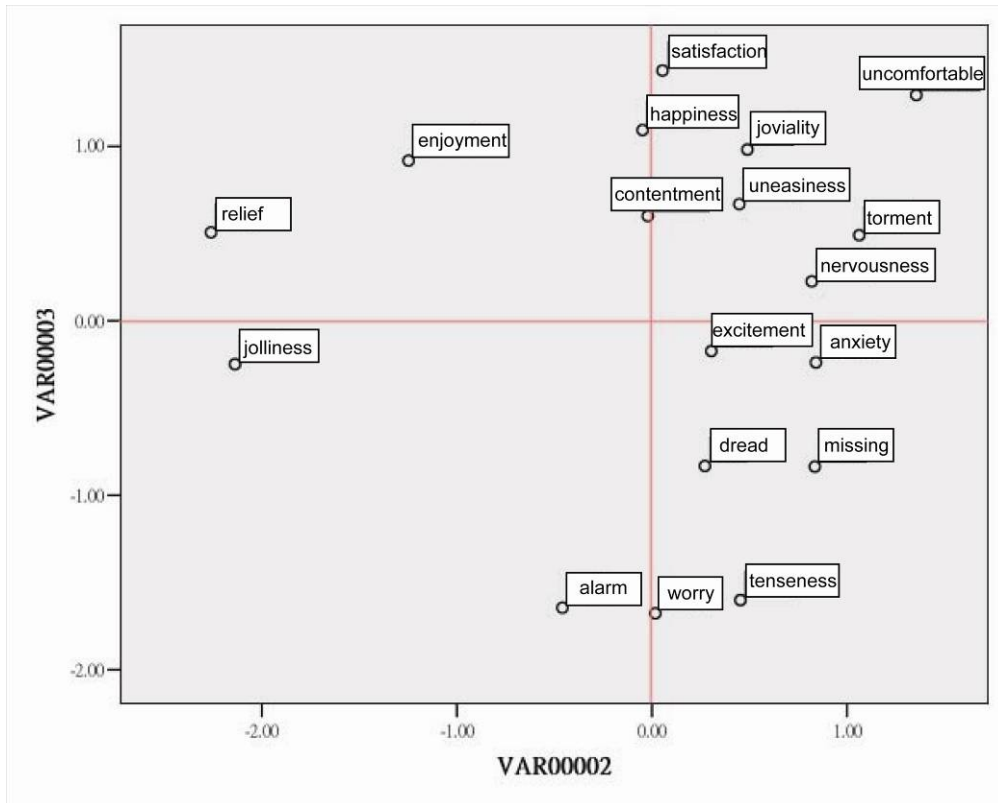


Figure 1: The “commuting – driving” scattered plot

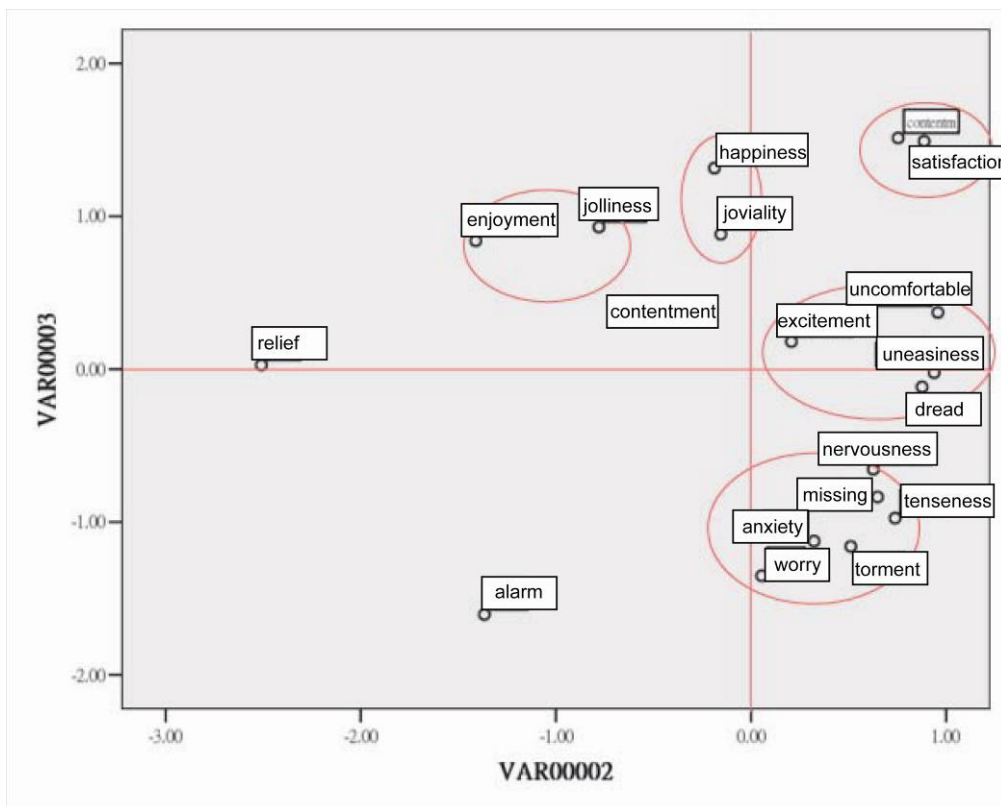


Figure 2: The “commuting – riding” scattered plot.

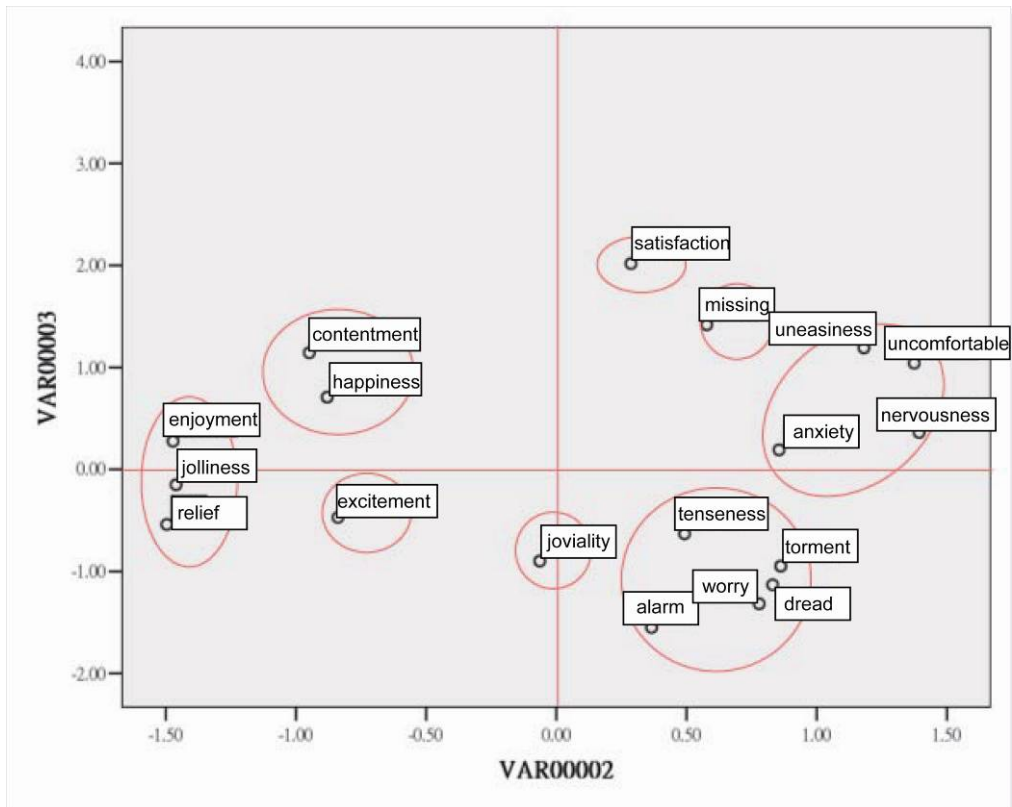


Figure 3: The “sightseeing – driving” scattered plot.

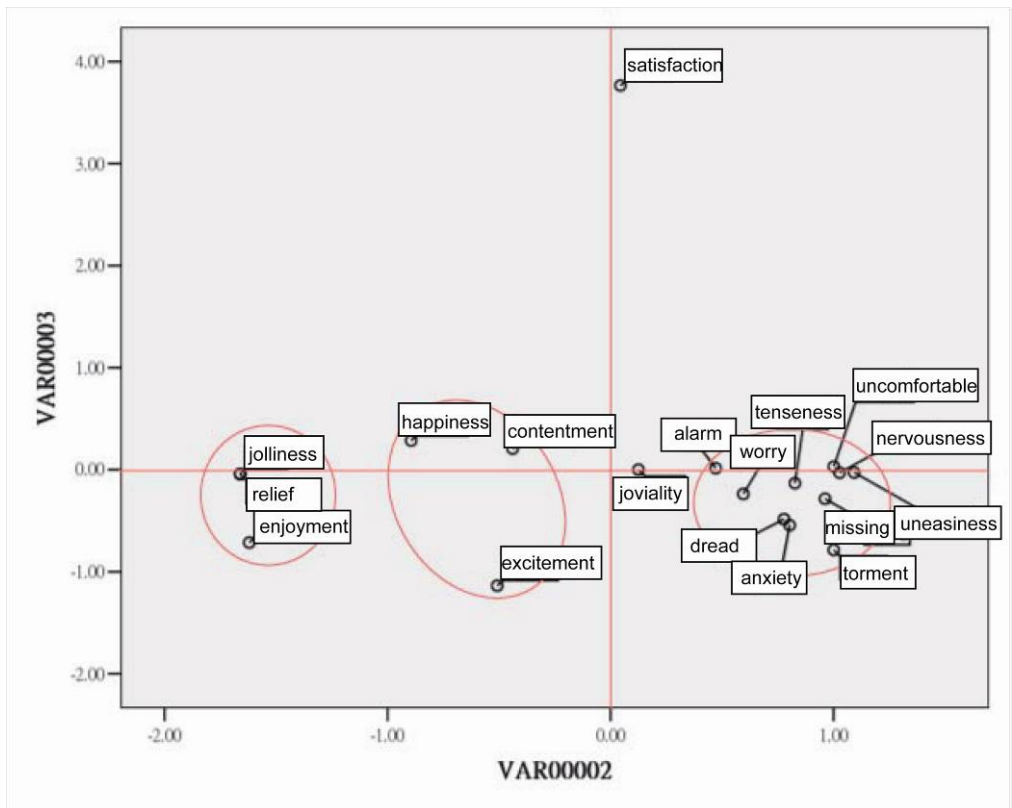


Figure 4: The “sightseeing – riding” scattered plot.

4. RESULTS

By observing the relations between phrases, it is obvious that the “commuting-dispersion/sightseeing-crowded” phenomenon under riding purpose; “driving-dispersion/riding-crowded” phenomenon under riding position.

To compare “commuting” and “sightseeing”, “commuting” has more regular distribution, but “sightseeing” presents clustered distribution which the closer mood gathered. On the other hand, when comparing “driving” and “riding”, “driving” has more scattered emotions; however, “riding” has a phenomenon that similar emotions concentrated.

5. DISCUSSION

In result, the emotion tendencies in different riding positions are not the same. People must face each kind of situation of roads and the sudden outbreak in “driving,” therefore each emotion appears nearly equal. In the “rides” condition people do not have to keep their eyes on the state of roads, so the outside is influential and producing very similar emotions. The chances to occur different moods are less. In the “commuting” situation, in accordance with different challenges as well as commuting occurs the sudden outbreak, each emotion appears on an average probability. In the “sightseeing” situation, because of holding the specific anticipation to the traveling schedule, as well as the condition that anticipation fails, the emotion transformation is more obvious. To be noticed, the emotions of people in the sightseeing situation will transform with several similar emotions, and will not change dramatically between positive and negative emotions.

This research merely discusses the correlation between different moods when people take vehicles in different situations. Following researches will discuss whether under these four kinds of situation, different identities and driving experience would have specific mood connections; furthermore, the senses that may mainly cause the connections.

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