

Fear Appeals to Be Conveyed in Antismoking Campaigns to Chinese Adolescents: Endangers Self or Others? And What Kind of Others?

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Outline of the Study

- I. Rationale and background information
- II. Theoretical framework
- III. Research design
- IV. Major findings
- V. Conclusion

I. Rationale and background information

- **Teen smoking rising among China's 130 million teens:**
 - 40 million children between the ages of 13 and 18 have tried smoking.
 - Three of every five Chinese smokers begin smoking at the age of 15-20 years.
 - 15 million are now addicted.
 - China's top priority in control of smoking should be educate the youth against smoking.



Risk factors for adolescent smoking in China:

- Adolescent smoking was not strongly associated with parental smoking.
- It was strongly associated with peer smoking & low refusal self-efficacy.
- Students with lower refusal self-efficacy were approximately 5-17 times more likely to be lifetime or current smokers than those with higher refusal self-efficacy.



Costs of the smoking problem:

- Economic cost of smoking to China: > 70 billion yuan (US\$10 billion)
- Creating what some critics called a country “with the biggest tobacco problem in the world.”
- In 2010, profits reached 604.5 billion yuan, up from 253 billion in 2006; taxes paid to the state rose to 498.8 billion yuan from 194.4 billion.
- **Health costs** of treating tobacco-related illnesses exceeded **tax revenue** from tobacco for the first time in 1999 and the deficit has been increasing each year since then, reaching 70 billion yuan in 2010.
- At least 50 million of the children now living in China will be killed by smoking.

Source: Tobacco facts, 2011

Fear appeals in antismoking campaigns

- “Endangers self” fear appeals are widely used in Chinese anti-smoking campaigns.



Other fear appeals in antismoking campaigns

- Besides the harm to their own health, smokers may encounter strong **social disapproval** from nonsmokers.
- Social or interpersonal risks can be regarded as another type of threat to smokers (Ho, 1998).
- “Endangers others” fear appeals, which highlight the harms that secondhand smoking may cause to the health of others around smokers (e.g., their family members, coworkers, and peers) are often used in antismoking campaigns as well.



II. Theoretical framework

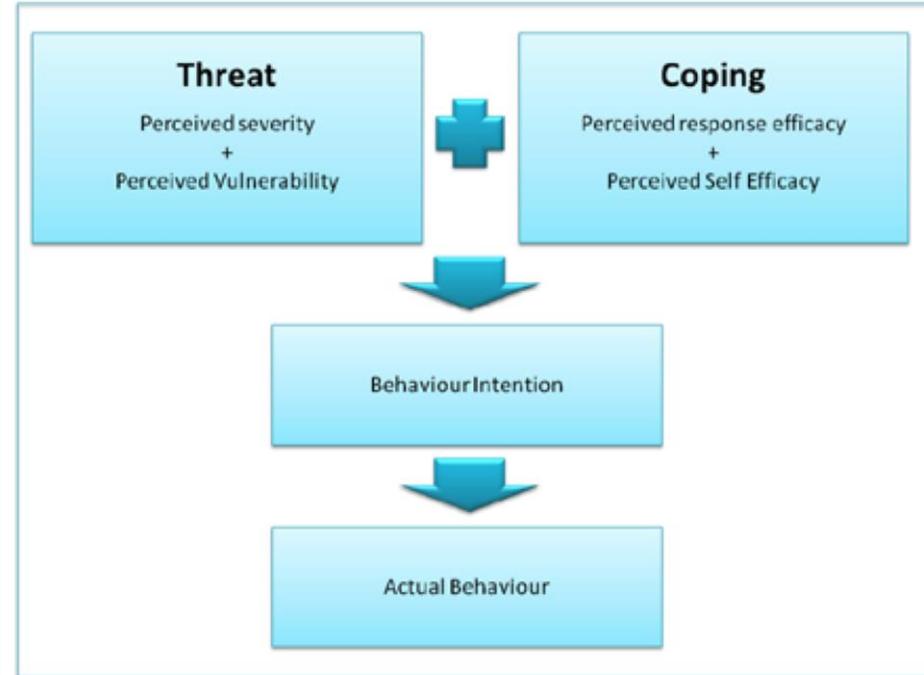
- Protection motivation theory
- Dimensions of national culture
- Relational distances pattern theory

Protection Motivation Theory

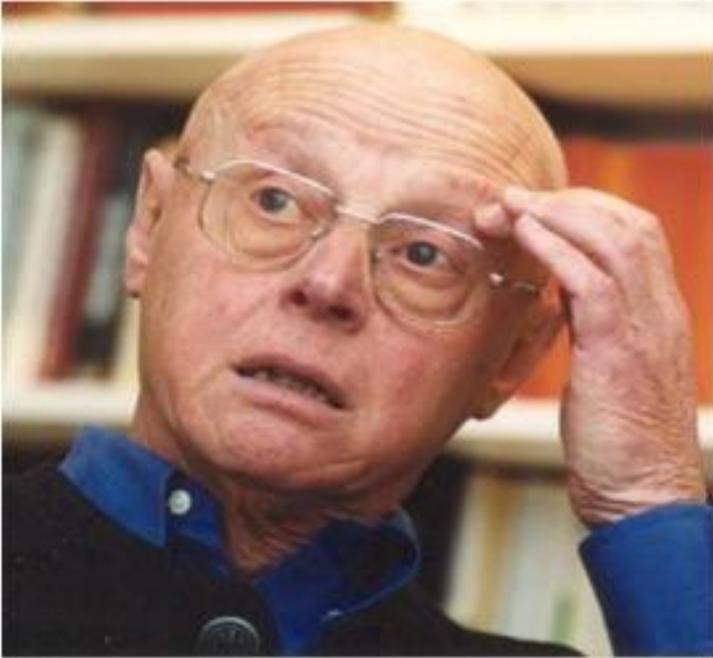
Originally proposed by Rogers (1975) to provide conceptual clarity to the understanding of fear appeals.

A later version (Rogers, 1983) extended the theory to a more general one in persuasive communication, with an emphasis on the cognitive processes mediating behavioral change.

Antismoking campaigns with “endangers self” fear appeals tend to be based on the PMT.



Hofstede et al. (2010): Dimensions of National Culture



Prof. Geert Hofstede

- Power Distance
- **Individualism vs. Collectivism**
- Masculinity vs. Femininity
- Uncertainty Avoidance

- Long-term vs. Short-term Orientation

- Indulgence vs. Self-restraint

Hofstede's Dimensions of Culture Index Scores

	China	Japan	Sweden	Canada	U.S.	World Average
PDI	80	54	31	39	40	55
IDV	20	46	71	80	91	43
MAS	66	95	5	52	62	50
UAI	30	92	29	48	46	64
LTO	118	80	33	23	29	45

Hofstede, G. (2007). *Culture's consequences* (3rd ed.). Thousand Oaks, CA: Sage.

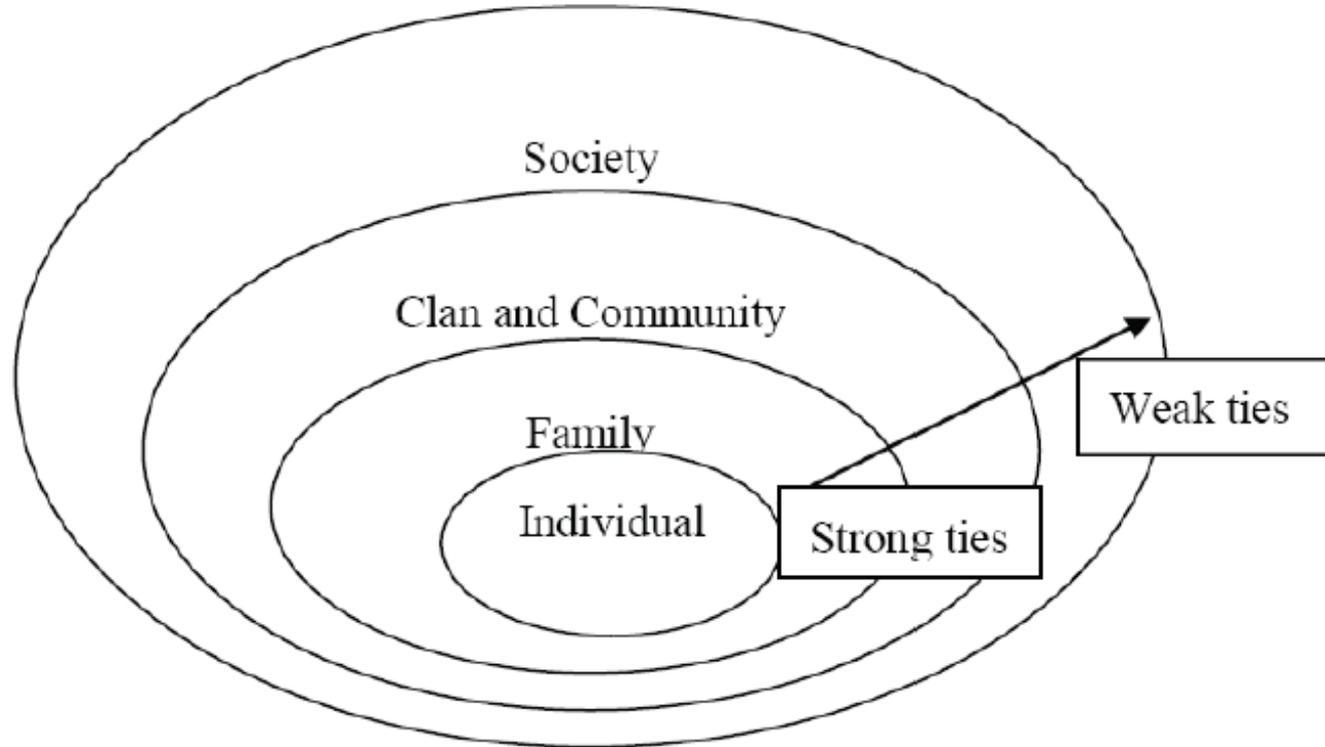
Fei (1947): Relational Distances Pattern



Prof. Fei, Xiaotong: 1910-2005

- To one in the Chinese culture, *others* have different distances from her/him.
- The closest others are family members.
- The most distant others are strangers, with friends in between.

Relational Distances Pattern



Source: Yang & Einstein, 2013

Liang, Suming (1893-1988)

- China is a family-based society, neither individual-based nor community-based (Liang, 2010).
- The general “others” can be too vague for antismoking campaign in China.

III. Research Design

Hypotheses

- H1:** “Endangers others” will be more effective than “endangers self” fear appeals in antismoking persuasion targeting Chinese adolescents.
- H2:** “Endangers family members” will be more persuasive than “endangers self” fear appeals in antismoking campaigns targeting Chinese adolescents.
- H3: (a)** “Endangers friends” and **(b)** “endangers strangers” will be less persuasive than “endangers family members” fear appeals in antismoking campaign targeting Chinese adolescents.

Method

Subjects: 220 high school students; 48.6% male; ages 15-17

- Adolescents were selected as subjects for this study on the possible effects of fear appeals to be used in antismoking campaigns.
 - Many adult smokers began smoking when they were teens.
 - Once they become addicted to tobacco, it is more difficult for them to quit than teens.
 - So, preventing teenagers from smoking could be more effective than persuading adults to quit (CDC, 2007).

Design:

Between-subject factorial with 1 factor—antismoking fear appeal—and 7 manipulated levels:

- 1) Endangers self's health
- 2) Endangers self's image
- 3) Endangers family members' health
- 4) Hurts family members emotionally
- 5) Destroys family relationships
- 6) Endangers friends' health
- 7) Endangers strangers' health

Adapted from Pechmann et al.'s (2003) study and based on Fei's (1947) and Liang's (2010) articulations.

1) Endangers self's health

吸烟对身体的危害巨大，是导致癌症尤其是肺癌的最危险因素之一，同时也会导致哮喘、肺炎、高血压、心脏病和生殖发育等疾病。吸烟对你来说，危害性就更大。你正处在生长发育时期，各生理系统、器官都尚未成熟，对烟草的作用更敏感，对烟草的有害因素的抵抗力更弱，更容易吸收烟草中的有毒物质，损害身体的正常生长，导致更大的潜在危害。



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2) Endangers self's image

吸烟会让人变丑。研究表明，吸烟不仅会使人的脸部出现皱纹并使脸色逐渐变黄，同时还会逐步扩展至整个身体的皮肤，使身体皮肤提前老化、起皱并变黄，吸烟者的皮肤皱纹的形成与加重的时间，比其实际年龄提早20年。同时，吸烟还会导致口臭、牙黄、有异味等不雅形象。她不会喜欢又老又丑的你，她不会愿意和像烟灰缸一样的嘴说话。



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3) Endangers family members' health

当你在家里吸烟的时候，你的父母不可避免地会吸入烟雾，成为二手烟的受害者。二手烟的危害超乎我们的想象，二手烟中包含4000多种物质，其中包括40多种与癌症有关的有毒物质。除了刺激眼、鼻和咽喉外，它也会明显地增加你的父母患上癌症尤其是肺癌的机会，同时也会增加哮喘、肺炎、高血压、心脏病和生殖发育等疾病的机会，严重伤害你父母的身体健康。



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4) Hurts family members emotionally

这世上最悲伤的事莫过于白发人送黑发人。如果你因为吸烟导致患上哮喘、肺炎、高血压、心脏病和生殖发育等疾病，甚至得了癌症过早死亡，这将会对你的父母造成巨大的精神伤害，这样的悲伤也许是一辈子也无法复原的。



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5) Destroys family relationships

吸烟会引起家庭争吵，破坏家庭和谐。如果不想因为吸烟的问题受到父母的责备和反对甚至与父母闹翻，如果不想父母因为你吸烟的问题吵架，如果不想因为烟草家无宁日，那就远离香烟吧！



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6) Endangers friends' health

当你在学校吸烟的时候，你的朋友不可避免地会吸入烟雾，成为二手烟的受害者。二手烟的危害超乎我们的想象，二手烟中包含4000多种物质，其中包括40多种与癌症有关的有毒物质。除了刺激眼、鼻和咽喉外，它也会明显地增加你的朋友患上癌症尤其是肺癌的机会，同时也会增加哮喘、肺炎、高血压、心脏病和生殖发育等疾病的机会，严重伤害你朋友的身体健康。



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7) Endangers strangers' health

当你在公共场合吸烟的时候，路人不可避免地会吸入烟雾，成为二手烟的受害者。二手烟的危害超乎我们的想象，二手烟中包含4000多种物质，其中包括40多种与癌症有关的有毒物质，除了刺激眼、鼻和咽喉外，它也会明显地增加路人患上癌症尤其是肺癌的机会，同时也会增加哮喘、肺炎、高血压、心脏病和生殖发育等疾病的机会，严重伤害路人的身体健康。



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Procedure:

The 220 subjects were randomly divided into 7 groups, with one group assigned to each condition.

Each subject read an ad and then completed a questionnaire.

Measures:

- Dependent variable for the measures adopted from Pechmann et al.'s 2003 study.
- Behavioral intentions were measured on a 5-point Likert scale, along with 3 similar statements (1 = strong yes; 5 strong no)
 - “In the future, you may smoke a puff or more of a cigarette.”
 - “You may try out smoking for a while.”
 - “If one of your best friends was to offer you a cigarette, you would smoke it.”
 - Cronbach α : between .825 to .879
- Whether the subjects had prior smoking experience or not were asked during the survey.
 - 27 students who had such an experience were excluded from the data analysis, leaving the total subjects to 193.

Result #1

Fear Appeals	N	Means	SD
1) Endangers self's health	25	4.21	1.03
2) Damages self's image	28	3.94	1.17
3) Endangers family members' health	27	4.49	.72
4) Hurts family members emotionally	25	4.59	.62
5) Damages family relationships	28	4.55	.89
6) Endangers friends' health	31	4.16	.97
7) Endangers strangers health	29	4.14	.67

Most means of **others-related appeals** were higher than those of **self-related appeals**, which **largely supports H1**. (“Endangers others” will be more effective than “endangers self” fear appeals.)

Result #2

Fear Appeals	N (= 193)	Means	SD
1) Endangers self's health	25	4.21	1.03
2) Damages self's image	28	3.94	1.17
3) Endangers family members' health	27	4.49	.72
4) Hurts family members emotionally	25	4.59	.62
5) Damages family relationships	28	4.55	.89
6) Endangers friends' health	31	4.16	.97
7) Endangers strangers health	29	4.14	.67

Post-hoc tests found that all 3 **family-related appeals** had a significantly higher means than “**damages self's image**,” but not significantly higher means than “**endangers self's health**.” **H2 is partly supported.**

(“Endangers family members” will be more persuasive than “endangers self” fear appeals.)

Result #3

Fear Appeals	N (= 193)	Means	SD
1) Endangers self's health	25	4.21	1.03
2) Damages self's image	28	3.94	1.17
3) Endangers family members' health	27	4.49	.72
4) Hurts family members emotionally	25	4.59	.62
5) Damages family relationships	28	4.55	.89
6) Endangers friends' health	31	4.16	.97
7) Endangers strangers health	29	4.14	.67

Both “**endangers friends**” and “**endangers strangers**” had significantly less intent on not smoking than each of the 3 family-related fear appeals.

Both H3a & b are confirmed. (H3a “**Endangers friends**” and H3b “**endangers strangers**” will be less persuasive than “**endangers family members**” fear appeals.)

V. Conclusion

- While **self-related** fear appeals may work to some extent for nonsmoking Chinese teens, **family-related** appeals could be the most persuasive.
- Findings:
 - a) largely support the **relational distance pattern theory** (Fei, 1947) and
 - a) shed some new light on the **protection motivation theory** (Pechmann et al., 2003; Rogers, 1975).

Thank You!

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