

### What Does Temperament Have to do with Engineering? 性情(性格)与工程有何种关系?

Delwyn G. Fredlund

Saskatoon, SK., Canada

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#### Introduction

- Dale Carnegie suggested that: Success is 20% training; 80% personality 戴尔.卡内基认为:成功有20%归结于训练; 80%归结 于人格
- Each person is born with a fixed "Temperament" 每个人都有与生俱来的固有"性情"
- "Temperament" is in the "Genes"
  "性情"根植在"基因"中
- Influences what you do in life, how well you do it and how much you enjoy doing it 它影响你一生的事功和你从中获得的快乐
- Websites; ~ 5000 "hits" 网站: 约5000点击次数

## History of the Temperament Theory 性情理论的历史

• Hippocrates (400 B.C.) suggested that there are 4 Temperaments types

公元前400年,古希腊的希波克拉底把人的性情 分为四种

- Extrovert: 外向型
  - Sanguine (Lively) 多血质[活泼]
  - Choleric (Active or Determined) 胆汁质[积极、坚决]
  - Melancholy (Sensitive) 抑郁质[敏感]
  - Phlegmatic (Easy-going) 粘液质[随和]
- Introvert: 内向型

### **Temperament Researchers**

- Galen (200 A.D.) provided a list of strengths and weaknesses for each temperament
  - 公元后200年,希腊医师伽林列出了每种性情的优缺点
- Myers-Briggs; 16 personality types 16种人格类型
  - Reducible to fewer major and minor combinations
  - 可以缩减为少量的主次性情的组合
- LaHaye
- Lattauer
- Linda Berens
- Employment placement forms 就业安排表

# Definition of Terms 术语定义

- Temperament: Combination of traits that subconsciously affect our behavior
   性情:潜意识下影响人们行为的综合特性
- Character: Temperament influenced by training, beliefs
  and motivations
  - 性格: 被后天的训练、信仰和动机影响的性情
- Personality: Outward expression displayed to the world 人格:面对世界的外在表现
- Note: Character and Personality may change throughout life but Temperament does not change!
   注意: 性格和人格可能改变但性情终生不变!

# You Have It For Life! 与生俱在!

 At the point of conception, each person inherits a basic genetic temperament (University of Minnesota)

每个人在受孕成胎之时继承一种基因性情

• Extroverts will remain as Extroverts and Introverts will remain as Introverts

外向的总是外向,内向的总是内向

- Each Temperament will have strengths and weaknesses 性情各有利弊
- Each person has a dominant temperament and a secondary temperament 有主次之分

#### All Temperaments Are Needed! 每种性情都需要!

- No such thing as a Good Temperament or a Bad Temperament 性情无所谓好坏
- Each Temperament brings a needed dimension to an organization such as an engineering office 每种性情都能为组织(例如工程公司) 带来必要的维度
- Each Temperament brings a bag of Benefits or Strengths 每种性情都有一揽子好处或优势
- Each Temperament also brings some Weaknesses or Challenges that need to be addressed 同样带来劣势和挑战

#### And who should you marry? 和谁结婚?

- The Chemistry of Love
  爱情的化学反应
- Should the Temperaments be the Same or Complimentary?

性情应该是相同还是互补?

 Courtship – Marriage – Honeymoon – Living Happily Everafter
 恋爱-结婚-蜜月-共度一生

# Categorization of the Temperaments 性情的分类

- Sanguine Temperament (Lively)
  多血质[活泼]
- Choleric Temperament (Active or Determined)
  胆汁质[积极、坚决]
- Melancholy Temperament (Sensitive)
  抑郁质[敏感]
- Phlegmatic Temperament (Easy-going) 粘液质[随和]

# **Sanguine Temperament** 多血质

The Sanguine is typically a fun-loving and warm person. He responds to situations based on immediate feelings rather than reflective thought (深思熟虑). A hearty (热 烈的), outgoing nature provides the capacity to enjoy being with people, lifting the spirits of all around. Storytelling comes naturally and there is never a lack of a friend. The world is always enriched by the cheerful Sanguine with his natural charisma (魅力).

The Sanguine goes from one exciting adventure to another and can readily miss appointments and obligations without malice (恶意). The person does not like solitude but needs to be surrounded by people, all of whom are his friends.

#### **Sanguine Temperament** 多血质

The Sanguine has an endless repertoire (剧目) of interesting stories, each embellished (修饰, 润色) with time. He is never at a loss for words and often speaks without thinking. He is the most extreme extrovert (外向的人), attracted to people more than to solving engineering problems.

The Sanguine may make an excellent salesperson or entertainer, but finds it extremely difficult to sit behind a desk, focused on solving one or more problems. The Sanguine certainly has a role to fill in engineering but one would hope that every person in the engineering firm were not of this temperament!

# **Choleric Temperament** 胆汁质

The Choleric is an active, practical and strong-willed person who is self-sufficient and independent. He thrives on activity and is decisive and opinionated (固执己见). He has endless ideas, plans and ambitions for himself and all those around him. He has a practical keen mind for decision making and long range planning (长远规划). He takes a definite stand on issues and is not easily wavered (动摇). It can be said that he is a natural leader who is quick to recognize an opportunity. His mind is well organized and he focuses on the goal without paying much attention to potential pitfalls (陷阱).

#### **Choleric Temperament** 胆汁质

The Choleric may have it hard to sympathize with others or feel compassion towards the concerns of others because of his driven nature. Committee meetings and planning are going to be boring for him. Rather, he simply wants to be the boss to get things done.

Most entrepreneurs (企业家) are Choleric and may start several businesses in one lifetime. He is the motivator who oozes (渗出) with self-confidence, often running roughshod over others (对他人残酷无情). So how many Choleric engineers do you need in one engineering organization? Is he already your boss?

#### **Melancholy Temperament** 抑郁质

The Melancholy is known as the gifted, analytical perfectionist who has a sensitive emotional nature. While he is known as the "dark" temperament, he has the richest quality to his temperament. At times he may appear to be depressed and withdrawn. He is prone to be an introvert but exhibits a variety of moods, even behaving as an extrovert at times. He may not make friends easily but in the end will be a faithful friend. He does not like to push himself into a job but once he overcomes his natural reticence (沉默), he will show himself to be dependable, doing an excellent job. In the end, he desires to be appreciated.

#### **Melancholy Temperament** 抑郁质

The Melancholy temperament has exceptional analytical abilities and can accurately diagnose problems and see dangers that may arise. He is known as the genius temperament. As a result, most of the world's great artists, musicians, inventors, philosophers, scientists and educators are Melancholy. They tend to exhibit greater creativity, imagination, vision and IQ. The Melancholy is capable of high quality or "nearperfect" work. If he is a musician, he will "feel" the music and if he is an engineer, he will provide a meaningful service to humanity.

#### **Melancholy Temperament** 抑郁质

Before one concludes that music and engineering are far apart, we should remember that many of the outstanding engineers in our profession have been musicians. It is the Melancholy temperament that will attract the largest percentage of engineers. They will be highly devoted to their work but under-estimate their achievements. Does this sound like many of our engineers, or even our profession? Obviously it will be necessary to hire quite a few Melancholy engineers since they comprise such a significant portion of our profession! And it should not be hard to think of several engineers who fall into the Melancholy category.

#### **Phlegmatic Temperament** 粘液质

The Phlegmatic is the calm, easy-going, well-balanced (四 平八稳的) temperament. He avoids involvement as much as possible. He seldom shows excessive anger or laughter but keeps emotions under control. Because of his kindhearted, sympathetic nature, he does not lack friends. They enjoy him and his dry sense of humor (冷幽 默). It will be hard to motivate him beyond his daily routine. He will show himself to be a competent person but will not take leadership on his own. He is a natural peacemaker (和事老), having a conciliatory influence (调和作用) in the home and the workplace.

#### **Phlegmatic Temperament** 粘液质

The Phlegmatic will make the perfect elementary teacher ( 小学教师) but also does well in engineering. His gentle nature gives rise to a peaceful working environment. He will not be a risk taker but thrives on his personal security. He desires to have the simple life-style, working in an orderly and calm surrounding. Usually his office will be an example of his desire to have everything in place.

Is there an engineer who comes to mind as you think about the Phlegmatic temperament? I'm sure that every manager of an engineering office will agree that it is extremely beneficial to have a Phlegmatic engineer in the office!

# Summary of the Various Temperaments 各种性情的总结

All Temperaments make a worthwhile contribution to life. 所有的性情都会对生活有所贡献。 It is the hard-driving and adventure-loving Choleric, who takes the ideas of the geniusprone Melancholy, along with the personable salesmanship of the Sanguine, to produce something that will be enjoyed by the easygoing Phlegmatic

正是那种积极进取、敢于冒险的胆汁质的人, 采纳了天才的抑郁质人的想法,借助多血质 人亲切的推销才能,创造了出让随和的粘液 质人享受的东西!

# **PERSONALITY PROFILE** Place an X in front of the word in each line that most often applies to you. **STRENGTHS**

| _Adventurous<br>爱冒险的 | <b>_Adaptable</b><br>适应能力强的 | _Animated<br>活泼的 | <b>_Analytical</b><br>善于分析的 |
|----------------------|-----------------------------|------------------|-----------------------------|
| _Persistent          | _Playful                    | _Persuasive      | _Peaceful                   |
| _Submissive          | _Self-<br>sacrificing       | _Sociable        | _Strong-<br>willed          |
| _Considerate         | _Controlled                 | _Competitive     | _Convincing                 |
| _Refreshing          | _Respectful                 | _Reserved        | _Resourceful                |

### **PERSONALITY PROFILE**

Place an X in front of the word in each line that most often applies to you. **WEAKNESSES** 

| _Blank<br>茫然的 | _Bashful<br>害羞的     | _Brassy<br>厚脸皮的      | <b>_Bossy</b><br>颐指气使的 |  |
|---------------|---------------------|----------------------|------------------------|--|
| Undisciplined | _Unsympath-<br>etic | _Unenthus-<br>iastic | _Unforgiving           |  |
| Reticent      | _Resentful          | _Resistant           | _Repetitious           |  |
| _Fussy        | _Fearful            | _Forgetful           | _Frank                 |  |
| _Impatient    | _Insecure           | _Indecisive          | _Interrupts            |  |

| 🖣 Personality Analysis Program [C:\Del\Writings\DelPersonality.pap] |               |                          |                     |                            |                      |                  |               |
|---|---------------|--------------------------|---------------------|----------------------------|----------------------|------------------|---------------|
| File Results Help   | Pe            | rsonality                | y Analys            | sis Progra                 | m人格分                 | 分析程序             |               |
| Name:   | Ema           | il address: unsaturateds | oil@yahoo.com       | Strengths -> Weakn         |                      | s: 0/20 - Weakne | sses: 0/20    |
|   | s             | TRENGTHS: Please         | choose one of the 4 | words in each question tha | t describes you most |                  |               |
| 1 C Animated C  | Adventurous   | C Analytical             | C Adaptable         | 11 C Delightful            | C Daring             | C Detailed       | C Diplomatic  |
| 2 C Playful C   | Persuasive    | O Persistent             | C Peaceful          | 12 C Cheerful              | C Confident          | C Cultured       | C Consistent  |
| 3 C Sociable C  | Strong-willed | C Self-sacrificing       | C Submissive        | 13 C Inspiring             | C Independent        | C Idealistic     | C Inoffensive |
| 4 C Convincing C  | Competitive   | C Considerate            | C Controlled        | 14 C Demontrative          | C Decisive           | O Deep           | C Dry humor   |
| 5 C Refeshing C   | Resourceful   | C Respectful             | C Reserved          | 15 C Mixes easily          | C Mover              | C Musical        | C Mediator    |
|   | ск г.,        | 0 n                      | C                   | 16 C Talker                | <u></u>              | C 71 1/41        | C T I .       |
| 6 C Spirited C  | Self-reliant  | Sensitive                | Satisfied           | 16 C Talker                | C Tenacious          | C Thoughtful     | O Tolerant    |
| 7 C Promoter C  | Positive      | C Planner                | C Patient           | 17 C Lively                | C Leader             | 🔿 Loyal          | C Listener    |
| 8 C Spontaneous C   | Sure          | C Scheduled              | C Shy               | 18 C Cute                  | C Chief              | C Chartmaker     | C Contented   |
| 9 O Optimistic O  | Outspoken     | O Orderly                | O Obliging          | 19 C Popular               | O Productive         | C Perfectionist  | C Pleasant    |
| 10 C Funny C  | Forceful      | C Faithful               | C Friendly          | 20 C Bouncy                | C Bold               | © Behaved        | C Balanced    |

View results

| 🖻 Personality Analysis Program [C: Del\Writings DelPersonality.pap] |   |  |  |  |
|---|---|--|--|--|
| File Results Help Personality Analysis                              | s Program 人格分析程序  |  |  |  |
| Name: Email address: unsaturatedsoil@yahoo.com                      | Ulick here for other 20 questions      Questions answered.        Weaknesses -> Strengths      Strengths: 0/20 - Weaknesses: 0/20 |  |  |  |
| WEAKNESSES: Please phoose one of the                                | 4 words in each question that describes you most  |  |  |  |
| 1 C Brassy C Bossy C Bashful C Blank                                | 11 C Wants credit C Workaholic C Withdrawn C Worrier  |  |  |  |
| 2 O Undisciplined O Unsympathetic O Unforgiving O Unenthusiastic    | 12 C Talkative C Tactless C Too sensitive C Timid   |  |  |  |
| 3 C Repetitious C Resistant C Resentful C Reticent                  | 13 C Disorganized C Domineering C Depressed C Doubtful  |  |  |  |
| 4 C Forgetful C Frank C Fussy C Fearful                             | 14 C Inconsistent C Intolerant C Introvert C Indifferent  |  |  |  |
| 5 C Interrupts C Impatient C Insecure C Indecisive                  | 15 C Messy C Manipulative C Moody C Mumbles   |  |  |  |
| 6 C Unpredictable C Unaffectionate C Unpopular C Uninvolved         | 16 C Show-off C Stubborn C Skeptical C Slow   |  |  |  |
| 7 C Haphazard C Headstrong C Hard-to-please C Hesitant              | 17 C Loud C Lord-over-others C Loner C Lazy   |  |  |  |
| 8 C Permissive C Proud C Pessimistic Plain                          | 18 C Scatterbrained C Short tempered C Suspicious C Sluggish  |  |  |  |
| 9 C Angered easily C Argumentative C Alienated C Aimless            | 19 C Restless C Rash C Revengeful C Reluctant   |  |  |  |
| 10 C Naive C Nervy C Negative Attitude C Nonchalant                 | 20 Changeable Crafty Critical Compromising  |  |  |  |
| 9 C Angered easily C Argumentative C Alienated C Aimless            | 19 C Restless C Rash C Revengeful C Reluctant   |  |  |  |

View results

#### **Computer Marking & Assessment** 电脑打分和评测

🖻 Personality analysis results

| ANALYSIS RESULTS   |     |      |      |                        |  |
|--|-----|------|------|------------------------|--|
| SANGUINE CHOLERIC MELANCHOLY PHLEGMATIC<br>POPULAR POWERFUL PERFECT PEACEFUL |     |      |      | PHLEGMATIC<br>PEACEFUL |  |
| Weaknesses:  | 1   | 6    | 9    | 4                      |  |
| Percentage (%)   | 5   | 30   | 45   | 20                     |  |
| Strengths:   | 0   | 5    | 14   | 1                      |  |
| Percentage (%)   | 0   | 25   | 70   | 5                      |  |
| Total (/40)  | 1   | 11   | 23   | 5                      |  |
| Percentage (%)   | 2.5 | 27.5 | 57.5 | 12.5                   |  |
| PERSONALITY: Melancholy perfect & Choleric powerful                          |     |      |      |                        |  |

Close



### **Temperament Test Location**

- Download the zipped folder Personality from:
  - http://www.ssgeo.zju.edu.cn/show .aspx?id=166&cid=68 下载软件
- Click on Setup.exe to install.
- Go for "readme" to find out more guidance.

## Summary of What We Have Learned! 总结

- Each Temperament has natural strengths 每种性情都有天生的优势
- No one temperament is superior 没有一种性情是更优越的
- Everyone can make a meaningful contribution 每个人都可以做出贡献
- You have a bag of GIFTS given to you 你有一揽子天才
- You have a bag of CHALLENGES before you 和一揽子挑战

#### Sanguine 多血质 **Strengths** Weaknesses Undisciplined,不守纪律 **Spontaneous** disorganized,缺乏条理 自然 Restless 静不下来 Spirited, lively 活泼 **Enthusiastic**, expressive Show-off, boastful 好吹嘘炫耀 有激情,有表现力 Emotional 感情充沛 Weak-willed 意志不坚 Inspiring 令人振奋 **Naïve**幼稚 **Talkative** 健谈 Loud 大声嚷嚷 **Outgoing**外向 Unstable 不稳定



### Choleric 胆汁质 Strengths Weaknesses

| Strong-willed 意志坚定       | <b>Stubborn</b> 固执  |  |
|--------------------------|---------------------|--|
| <b>Positive</b> 积极       | Arrogant 傲慢         |  |
| <b>Competitive</b> 爱竞争   | Abrasive            |  |
| Assertive, decisive 自信果断 | Bossy 颐指气使          |  |
| Forceful 强有力的            | Cruel 残忍            |  |
| Persistent 执着            | Workaholic工作狂       |  |
| Self-reliant 自力更生        | Unaffectionate 缺乏情感 |  |

| Melanch   | oly抑郁质                                |
|---|---------------------------------------|
| Strengths   | Weaknesses                            |
| Analytical 善分析                                    | Critical 多批判                          |
| Idealistic 理想化                                    | Skeptical 多疑                          |
| Perfectionist 完美主义                                | Fussy, hard-to-please<br>爱挑剔,难取悦      |
| Artistic 有艺术细胞                                    | Moody, loner 情绪化,孤独                   |
| Sensitive 敏感                                      | Too sensitive, self-<br>conscious 太敏感 |
| <b>Thoughtful</b> , <b>considerate</b><br>多思,考虑周到 | Suspicious, revengeful<br>多疑,记仇       |
| Self-sacrificing 自我牺牲                             | <b>Insecure</b> 不安                    |

State State State

|    | <b>Phlegmatic</b> 粘液质 |                         |  |  |  |  |
|----|-----------------------|-------------------------|--|--|--|--|
|    | Strengths             | Weaknesses              |  |  |  |  |
|    | Easy-going, adaptable | Nonchalant, indifferent |  |  |  |  |
| L. | 随和,适应力强               | 冷淡                      |  |  |  |  |
|    | Peaceful 平和           | Fearful, worried 担忧     |  |  |  |  |
|    | Diplomatic 有礼节        | Indecisive 犹豫不决         |  |  |  |  |
|    | Controlled, calm 自制   | Unenthusiastic 缺少激情     |  |  |  |  |
|    | Consistent 始终如一       | Reluctant 不情不愿          |  |  |  |  |
|    | Contented, patient    | Uninvolved, lack        |  |  |  |  |
|    | 满足,有耐心                | initiative 参与性、自发性差     |  |  |  |  |
|    | Humorous 幽默           | Sarcastic 爱嘲讽           |  |  |  |  |

#### Another Way to Summarize the General Characteristics of Each Temperament

- Sanguine enjoys people, but forgets them.
- Choleric uses people and ignores them.
- Melancholy gets disgusted (厌恶) and let's people go.
- Phlegmatic studies people and remains indifferent (漠不关心的)
- Good to re-focus on positive attributes after studying the "weaknesses"

#### **Problems Common to all Temperaments**

- Egotism (自我中心) and Selfishness (自私) stemming from "Pride" are common to all temperaments
- Sanguine: Give me the attention of others
- Choleric: Give me the pleasure of doing it "My Way".
- Melancholy: Give me acceptance
- Phlegmatic: Give me freedom from conflict

#### We all have a "GIVE ME" Problem!

## **Temperament of Engineers**

- Engineering tends to have "exact" procedures and methodologies for problem solving
- Engineering is an expression of the Melancholy temperament 抑郁质
- In reality, engineering is multi-faceted
  - Choleric: brings leadership 胆汁质
  - Sanguine: brings social skills 多血质
  - Phlegmatic: brings patience and endurance 粘液质

#### Temperament and the Success of an Engineering Organization

- BUSINESS DEVELOPMENT: 业务拓展
  - Getting jobs and promoting the company (Sanguine) 多血质
- OFFICE ADMINISTRATION: 办公室管理
  - Logistics and daily operations (Phlegmatic) 粘液质
- PROJECT MANAGEMENT: 项目管理
  - Core of Revenue (收入) Generation (Melancholy) 抑郁质
- THE BOSS ??? [Choleric??] 胆汁质??

Though civil engineering stands at the center stage of becoming the key to survival, civil engineering is a much misunderstood and widely underestimated profession 作为人类生存的关键之一, 土木工程这一职 业被严重误解和广泛低估

It is a melancholy paradox (抑郁质矛盾):

In its moment of ascendance(上升阶段)when severely needed by society, civil engineering is frequently faced with the trivialization of its purpose(目的琐碎化)and the debasement of its practice(实践被低估)

**Professor Heinz Brandl** Technical University of Vienna, Austria, 2004



#### **Reminder:**

You can never change the Temperament of your spouse 你无法改变配偶的性情

You can never change the Temperament of your children 你无法改变孩子的性情

You can never change the Temperament of those with whom you work! 你无法改变同事的性情!

You must simply love and appreciate them! 你只能简单地爱和欣赏它们!



# **Closing**:

"By understanding your temperament, you can strive to enhance your strengths and reduce your weaknesses"





# **Your Examination!**

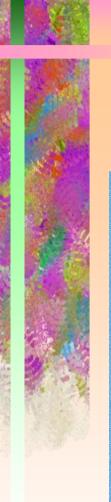
Can you guess the Major Temperament of some of the past Presidents of the United States?

# A Very Determined and Driven Man 一个坚定、锐意进取的男人



Ended up getting caught by the Press in the Water-Gate bugging (水 门窃听事件) and was impeached (弹劾) from office.

Lawyer



37

Rich

## A Very Determined and Driven Man 一个坚定、锐意进取的男人

Jer

Nixon



Ended up

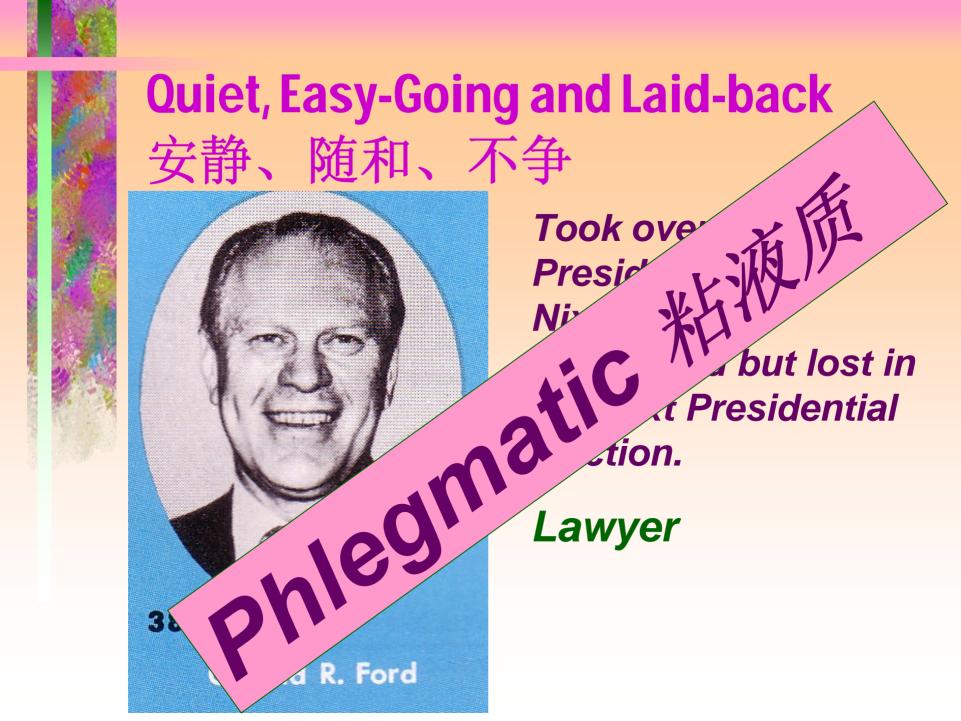
caugh

#### Quiet, Easy-Going and Laid-back 安静、随和、不争

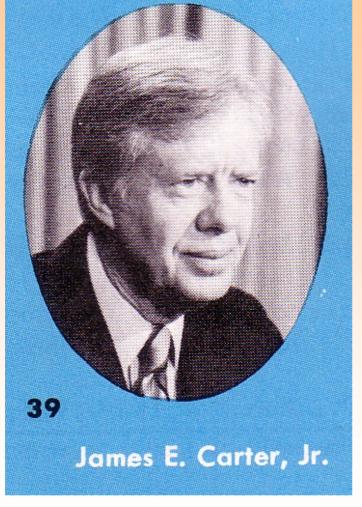


Took over as President when Nixon was impeached but lost in the next Presidential election.

Lawyer



## Compassionate and Gentle 有同情心、温和



Businessman

Was known as the Peanut farmer from Georgia. He did much for the U.S.A. but the Press felt he was too 'meek' (温顺的) and 'mild'(不温不火的) to run the country. Since his presidency he has run Habitat for Humanity(为世界各地 穷人免费建筑房屋的非 盈利性志愿团体)

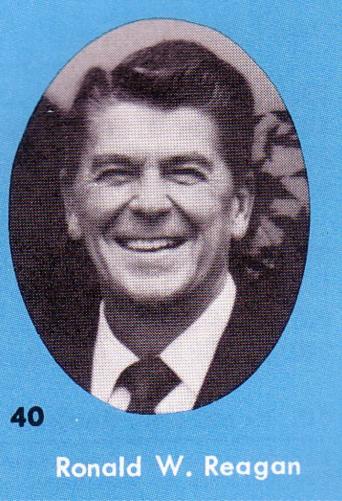
#### Compassionate and Gentle 有同情心、温和 Was known a

Peanut far

39 Ger, Jr. Businessn

Georgi at the fo e was too Ind 'mild' to *Me country. Since As presidency he has* run Habitat for **Humanity** 





Was a friend to everybody. Found it hard to handle the **Press.** Often spoke too quickly and sometimes forgot what he was supposed to say Actor



Was a f d it ever e the en spoke ckly and what he was suppose to say Actor

## Nobody Has a Temperament Advantage! 没有人拥有性情优势!

- You were born into the world with: 你生来具有
  - Enough positive attributes in your Temperament to be successful in life
    - 性情中足以使你成功的正面素质
  - Enough weaknesses in your Temperament to keep you humble

性情中使你保持谦逊的弱点

 You need to be thankful for your positive attributes (or strengths) and seek to change your weaknesses into strengths 你应该赞赏自己的长处并试图把短处转化为长处



