“Heroes and Role Models for a Successful Career”

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Disclaimer

• This is an informal presentation prepared with the purpose of stimulating self-reflection and development. No material is guaranteed for its precise accuracy.

• Some of the material provided comes from a web search of “heroes and role models”, where the sources are not well referenced, are in the public domain and where quality varies. Again, the ideas are simply to set you thinking.

• Materials should not be used for anything other than personal use.
Your career

- What is your identity?
- Do I have a career goal?
- What is the standard I set for myself?
- Who/what (heroes and role models) provides me with that:
  - Vision?
  - Sense of values?
- Do I want to stand out or simply blend in?
- Am I aware of these issues as I move through my education and training
Determinant theory of phenotype

\[ \text{Phenotype} = \sum \[(\text{Environmental Exposure}) \times (\text{Genotype})]\]  

John Mathers, Newcastle University, 2009

Behaviouralists are of the view that heroes and role models will play a major part in development of the phenotype (the career).
Comment on the radio

• “We do not talk any more about heroes because all heroes are tarnished – consider Hitler.”
  
  – “Hitler was a hero in all purity. He might be racist, but he was a patriot. He was determined to stick to his policies, and was confident of his stand.”
  (Anonymous blogger.)

• Is this your sort of hero?
Heroes vs Role models

• I think that it is important to make a distinction between the heroic figures that we value and the role models that have impacted our lives.

• What are the characteristics that differentiate our heroes from those people who have acted as role models for us?

• How do heroes and role models affect our behaviour and the way we relate to the world?
Heroes

• People tend to idealize their heroes and believe that they live in a world of perfection.
  – Who can forget the wreaths for Lady Di.
  – Often people have an uncanny capacity to lose themselves in the process of honouring their beloved heroes.
  – Some of us become an extension of the heroes that we embrace.

• The kind of heroes promoted by a culture, reveals a great deal about that culture's values and desires. (Same for an individual.)
• As adults, we may pass this phenomenon of hero adoration down to our children.

• Recently, a Congressional Committee heard testimony from a representation of Major League Baseball “heroes” (Hall-of-Famers).
  – Some congressional committee members actually demonstrated their sense of awe and wonder, by commending the players for elevating the game to its finest tradition.
  – Compare this with strikes for pay, drug use and so on
Several of my heroes

• Mathew Flinders
  – Courage in the unknown before technology

• Hubert Wilkins
  • Courage in the unknown with emerging technology

• Biblical Joseph
  – Supremely adaptable in adversity

• Charles Darwin
  – Deduced likely “truth” based on observation where the truth seemed opposite to dogma

• Archbishop Wilberforce
  – Maligned by scientists but probably the world’s greatest social reformer.
Heroes get away with stuff

- We are enthralled with our heroes.
- Regardless of our hero's behaviour and integrity, we often become enamoured with their power and status and allow ourselves to become an extension of their values and beliefs. In our rush to embrace our heroes, we ignore their humanity.
- We don't want to see them as real people because it diminishes the significance of their importance to our lives.
- We care little about what Martin Luther King called the "content of one's character."

- We believe that our heroes are more important and deserving than we are. One prominent baseball pitcher told his young admirers, "I am not your hero kids; if you want a hero go home and talk with your parents."
- So, what about role models?
Role models

• Role models are significantly different from heroes.
• Role models are the people who come into our lives in a personal manner and enrich our experience.
• They give advice, teach, coach, encourage, support and protect those within their sphere of influence.
• They are the parents, friends, neighbours, bosses, teachers, colleagues, workmates and community members that we value.
Role Models

• Who do we find useful?
• How do we pick them?
• Do we pick correctly?
Hero–role model continuum

- One way to gauge popular culture's influence on superhero play is to compare the kind of play children engaged in before and after the arrival of television.
- In one retrospective study (French & Pena, 1991), adults between the ages of 17 and 83 provided information about their favourite childhood play themes, their heroes, and the qualities of those heroes.
- People who grew up before television reported engaging in less fantasy hero play and playing more realistically than kids who grew up with television.
- While media was the main source of heroes for kids who grew up with television, the previous generations found their heroes not only from the media, but also from direct experience, friends / siblings, and parents' occupations (French & Pena, 1991).
Who do we choose?

• Whom do children actually choose as role models, and why? The authors surveyed children about their heroes and role models, both people they know and famous people or imaginary characters. Survey questions also addressed children's interaction with television, film, computer/video games, books, and comic books. The children talked about their answers in small groups. One hundred and seventy-nine children, ages 8 to 13, were surveyed from five day camp sites in central and southern California.

• 70 percent of the African American and 64 percent of the White children chose people they knew as heroes. In contrast, only 35 percent of the Asian American kids and 49 percent of the Latino kids named people they knew. This latter finding seems paradoxical; Asian American and Latino children would seem more likely to choose people they know as role models because their ethnic groups are represented less frequently in mass media than are African Americans and whites.

• One feature of role modeling is that children tend to choose role models whom they find relevant and with whom they can compare themselves (Lockwood & Kunda, 2000). Children who do not "see themselves" in the media may have fewer opportunities to select realistic role models. Two ways to assess similarity is to consider the ethnicity and gender of children's chosen role models. Do children tend to select heroes who are of their same ethnic background? Because data was not available on the ethnic background of the reported role models whom the children knew personally, the authors examined only the heroes from the media, whose backgrounds were known, to explore this question (see Figure 2). African American and white children were more likely to have media heroes of their same ethnicity (67 percent for each). In contrast, Asian American and Latino children chose more white media heroes than other categories (40 percent and 56 percent, respectively).
The survey began with the following: "We would like to know whom you look up to and admire. These might be people you know, or they might be famous people or characters."

More respondents described a person they knew (65 percent) rather than a person they did not know, such as a person or character in the media (35 percent).

When asked in focus groups why they picked people they knew instead of famous people, one 10-year-old white girl said, "I didn't put down people I don't know because when nobody's paying attention, they do something bad."

Another student said, "Some [media figures] are just not nice. Some famous people act good on TV but they're really horrible."

Thus, some children employed a level of skepticism when judging the worthiness of a role model.
Admirable qualities

• When asked why they admired their heroes and role models, the children most commonly replied that the person was nice, helpful, and understanding (38 percent).
  – Parents were appreciated for their generosity, their understanding, and for "being there."
Admirable qualities - 2

- The second most admired feature of kids' role models was skill (27 percent).
- The skills of athletes and entertainers were most often mentioned.
- The third most frequently mentioned characteristic was a sense of humor (9 percent), which was most often attributed to entertainers.
Finding the best role models

• The best role models are people who help us see our own strengths and build on them.
• They draw forth our strengths, not our insecurities.
Determinant theory of phenotype

Phenotype = \sum [(Environmental Exposure) \times (Genotype)]

John Mathers, 2009
A personal example

• Theory explaining phenotype and its determinants
• Story 1 – the stimulus; molecular epidemiology in PNG
• Story 2 – Global health improvement
Story # 2; Acute diarrhoea

• **Problem**: Acute diarrhoea kills >2,000,000 infants each year. ORS formulae enhance fluid uptake in small bowel only.

• **Strasbourg 1993; Henry Binder (Yale) and Ramakrishna (CMC Vellore)**
  – Hypothesis: Colonic salvage of fluid and electrolytes is enhanced by increasing butyrate in the colon.

• **Challenge**: How do we get butyrate to the colon?
An unexpected spin-off

• Our work in rats and humans indicated that feeding a starch resistant to amylase (resistant starch, RS) increased faecal butyrate.

• Idea: Suggested that RS might provide a source for butyrate in conditions of rapid fluid throughput such as in cholera.

Hypothesis: That colonic salvage of fluid and electrolytes in acute diarrhoeal disorders is achieved by feeding RS to increase fermentative production of SCFA,

And, this improves upon the outcomes achieved with standard oral rehydration solutions.
Starch is fermented by cholera faeces

Ramakrishna et al, Gastroenterology 1994; 106: A264
Clinical trials - HAMS in cholera

- Formal clinical RCT undertaken in Vellore in India (at CMC).
- Adults with cholera randomised to standard ORS or HAMS-ORS (50g/L)
- Endpoints: rehydration, dehydration, stool output.

Ramakrishna, Young et al,
HAMS reduces faecal weight in adult cholera

Ramakrishna, Young et al, N Engl J Med 2000
HAMS reduces diarrhoea duration in cholera

Ramakrishna, Young et al, N Engl J Med 2000
But
Evidence is often insufficient to bring about change
Evidence is insufficient to bring about change
Partners

1. Flinders University of South Australia.
2. Yale University, USA.
3. The Christian Medical College, Vellore, India.
5. Scientific & Technical advisors. (Ian Brown – CloverCorp)
6. PATH – a specialist NGO in developing countries.
7. UNICEF.
8. WHO.
9. Danone
10. Supply chain;
    i. National Starch & Chemical Company.
    ii. GTC/CPI.
The project: goals

1. To increase worldwide usage and effectiveness of oral rehydration therapy (ORS)
2. Determine if we can find a better RS.
3. Prove our advance works in all contexts across the world.
   – Study in 1,800 children at several sites ($15M)
4. Prove it reduces hospitalisation
   – 30,000-40,000 children in at least 2 centres ($35-50M)
5. Solve supply and access issues
6. In other words, reformulate ORS and change how it is delivered.
Determining the phenotype

Phenotype = \[\sum (\text{Environmental Exposure} \times \text{Genotype})\]

If the formula is true, then credit is actually due to the determinants.
Personal Environmental contributors

• Institutional environments: RMH, Alfred, Washington University St Louis, QEH, Flinders-FMC-Repatriation Daw Park
• GESA and 35 years of collegiality
• Australian teachers and mentors
• International colleagues and mentors.
• Students
• Colleagues and team-members; n = 422
• Silent partners
Reflections

1. Focus on the problem if aiming to make a difference
   – Avoid being limited to your own set of skills
   – Be passionate (science can be too dispassionate)

2. Engage with teams to construct solutions to the problems

3. Learn from your experiences and be prepared to change
   – Role models are more useful than heroes