Using Heart Rate Variability to Analyze Stress in Conversation

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Vapor Lock
Maybe Difficult Conversation?

- Boss
- Negotiation
- Subordinates
- Friends
Get Better at Avoiding Vapor Lock

Boss

Give me a lower price!

Subordinates

Friends
What did I do?

Measured my heart rate variability when in conversations with work colleagues.
Heart Rate Variability (HRV)

Heart beat intervals vary
Difficult Subjects as Threats

No Threat
“RELAX..”
HIGH HRV
Brain Engaged

Threat
“RUN!”
Low HRV
Vapor Lock
LOW HRV VAPOR LOCK

With whom, and when?
How did I do it?

Wore off the shelf wearables, took reading during meeting, export data to excel
Measured

154 Conversations

- 27 reporting to Bosses
- 87 with Colleagues
- 4 as Interviewer
- 11 Public Speaking
- 25 Staff meetings
Conditions For Vapor Lock

- For more than 9 consecutive heart beats,
- Interval between successive beats is under 17 ms
Percent of Time in Vapor Lock

13.3% in Vapor Lock
What did I learn?

Difficult conversations are not consistent creators of Vapor Lock.
Did Not Get Better With Practice

% of Time in Vapor Lock

Trend Line
Not Correlated with Difficulty

\[ R = .17 \]  No Relationship

Less Difficult  More Difficult
Number of People in the Room

Vapor Lock

Brain Engaged
### Number of People – The Data

<table>
<thead>
<tr>
<th># People</th>
<th>Avg % Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td>2</td>
<td>11%</td>
</tr>
<tr>
<td>3</td>
<td>16%</td>
</tr>
<tr>
<td>8</td>
<td>46%</td>
</tr>
<tr>
<td>18</td>
<td>59%</td>
</tr>
<tr>
<td>85</td>
<td>78%</td>
</tr>
</tbody>
</table>

$R = .73$ Very Strong Relationship
New Ninja Strategy...

Stick to a few points

OK for difficult subjects
Conclusions

• Cannot avoid Vapor Lock when there are a large number of people
• Controversial or thoughtful topics are best in 1 on 1 conversations
• Next study: How does the time of day impact the ability to cope with difficult conversations