LibRA: On LinkedIn based Role Ambiguity and Its Relationship with Wellbeing and Job Performance

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Job satisfaction is of prime interest to both individuals as well as the organizations.
Role Ambiguity occurs when there is a discrepancy between:
... what an employer expects, and
... what an employee does
ROLE AMBIGUITY

- Lack of clarity regarding:
  - definition of the role
  - expectations associated with a role
  - methods for fulfilling known role expectations, and/or
  - the consequences of role performance.

- Leads to dissatisfaction, distrust, lack of loyalty, turnover, absenteeism, low performance, anxiety, increased heart rate
Measuring Role Ambiguity
LinkedIn: “The Facebook in a suit”
RESEARCH AIMS

- **To measure** role ambiguity using LinkedIn data
- To examine the relationship of LinkedIn based Role Ambiguity (LibRA) with individual wellbeing and job performance
- To investigate what factors may contribute to one’s LibRA
STUDY AND DATA: TESSERAE

257 Participants

LinkedIn

Wearable
Smartphone
BT Beacon
Surveys
The quantified **differences** in an individual’s **self-explained responsibilities** against the employer’s **posted responsibilities** for the same role.
Freshly Experienced Software Engineer with a demonstrated history of working in the computer software industry with a specialization in Machine Learning.

An Ongoing

Software Development Engineer

Worked for Core Services Engineering with the C that serves the Sales Excellence Personnel of and ensures they generate revenue as quickly as possible.

Delivered mission-critical systems that generate large amounts of data capable of directly influencing key decision makers of the company. Constantly striving to improve the system to be fault resilient and reliable as the bytes that flow through it impact all of

On a Technical note, I designed and built a highly scalable API leveraging that brought down a business process from 2 weeks to 6 days with 0.1% inconsistencies churning more than 25 million requests during the said period. See less
ASSESSING LIBRA: USING O*NET ONTOLOGY

O*Net\(^1\) is an online database and job ontology that contains comprehensive list of jobs and their descriptions.

<table>
<thead>
<tr>
<th>Job Aspect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abilities</td>
<td>Enduring attributes of the individual that influence performance.</td>
</tr>
<tr>
<td>Interests</td>
<td>Preferences for work environments and outcomes.</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Organized sets of principles and facts applying in general domains.</td>
</tr>
<tr>
<td>Skills</td>
<td>Developed capacities that facilitate learning or the more rapid acquisition of knowledge.</td>
</tr>
<tr>
<td>Work Activities</td>
<td>General types of job behaviors occurring on multiples jobs.</td>
</tr>
<tr>
<td>Work Context</td>
<td>Physical and social factors that influence the nature of work.</td>
</tr>
<tr>
<td>Work Styles</td>
<td>Personal characteristics that can affect how well someone performs a job.</td>
</tr>
<tr>
<td>Work Values</td>
<td>Global aspects of work that are independent to a person’s satisfaction.</td>
</tr>
</tbody>
</table>

\(^1\) Developed under the sponsorship of the U.S. Department of Labor/ Employment and Training Administration (USDOL/ETA).
For every individual, obtain word-embedding projections (cosine similarity) on O*Net based eight job aspects of:

- Their LinkedIn summary (v1)
- The job summary of the same role as posted by the company (v2)

LibRA = Euclidean Distance (v1 – v2)
LIBRA: CRITERION VALIDITY

**Spearman’s correlation of LibRA and Survey**¹ based role ambiguity = 0.22 (p < 0.05)

LIBRA IN OUR DATASET
Greater role ambiguity is associated with...
- increased heart rate
- increased stressful arousal
- decreased sleep
- reduced work-hours

Greater role ambiguity is associated with...
- decreased task performance
- decreased organizational citizenship

\[ \sim \text{gender} + \text{age} + \text{education\_level} + \text{income} + \text{supervisory\_role} + \text{tenure} + \text{job\_type} \\
+ \text{executive\_function} + \text{personality\_trait} + \text{LibRA} \]
**LIBRA AND WELLBEING (AROUSAL)**

H2 Supported: LibRA has **positive** relationship with **stressful arousal**, and **negative** relationship with **restful arousal**
**LIBRA AND JOB PERFORMANCE (TASK PERFORMANCE)**

H5 Supported: LibRA has **negative relationship** with task performance, and **negative relationship** with change in task performance.
SUMMARY OF AIM 2

LibRA is associated with depleted wellbeing and job performance.
FACTORS AFFECTING LINKEDIN BASED ROLE AMBIGUITY (LIBRA)
INVESTIGATING FACTORS AFFECTING LIBRA

Individuals’ Organizational Behavior

- Looking for new job opportunities / generally settled at work
- Proactive behavior
INVESTIGATING FACTORS AFFECTING LIBRA

Individual-Intrinsic Factors

- Mindset (Growth vs. Fixed)
- Differences in self-presentation behavior on social media
INVESTIGATING FACTORS AFFECTING LIBRA

Job-Related Factors

- “Cool” job titles (eg, ninja) can affect role ambiguity
- Companies encouraging / discouraging LinkedIn
- Confidential projects / non-disclosure agreements
INVESTIGATING FACTORS AFFECTING LIBRA

Audience, Privacy, and Platform Factors

- Invisible audience
- Surveillance / Subjective expectation of privacy
IMPLICATIONS

- Theoretical Implications
- Practical and Technological Implications
  - Individual-Centric Implications
  - Organization-Centric Implications
- Social Computing Implications
- Ethical, Privacy, Social, and Policy Implications
PRACTICAL AND TECHNOLOGICAL IMPLICATIONS

- Individual-Centric Implications
  - Self-Reflection Tools
- Organization-Centric Implications
  - Training
  - Informed role matching and internal hiring
ETHICAL AND POLICY IMPLICATIONS

- Raises new questions on the privacy-breach of individual information
- Not intended to facilitate employee surveillance
- Guidelines on data-driven decision making
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