


## Conversations for Action

*An Introduction to the Concepts and Uses of Language Processing*

*Based on the work of Prof Shoji Sheba,  
JUSE 2002 Deming Prize Winner & CQI Companion*


**My Desired Outcomes for this Session:**

1. To whet your appetite for the importance of language processing
2. You just can't wait to try it yourself




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## Conversations for Action



**Extract from the JUSE 2002 Deming Prize Citation**

...for Prof. Sheba's dedication to the development of the globalization of TQM ...

...for introducing **semantics** to problem solving processes and developing the process for **soft data**



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## Conversations for Action

### **Part 1: Getting to know Bessie the cow**

- Language Processing as an aid to Improved Communication, Problem Solving, and Decision Making
  - Why language processing?
  - Numbers and language
  - Language and the Problem Solving Process (The WV Model)
  - Semantics: The fundamental Concepts applied to problem solving
  - Introducing the Language Processing (LP) tool
  - Examples of where has language processing been successfully applied

### **Part 2: Jump into the fishbowl**

- Using Language Processing



## Why Language Processing?

- In the world of *Quality* and Business Improvement we rightly place heavy emphasis on collecting, analysing, and understanding **data**
- However, when we think of data - we typically think of **numbers**
- We get obsessed with numbers, so we have lots of tools, techniques and technologies to help us make sense of numbers
  - Statistics
  - SPC
  - Spreadsheets
  - Databases
  - Dashboards
  - Control (Process Behaviour) Charts
  - etc.



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## Why Language Processing?

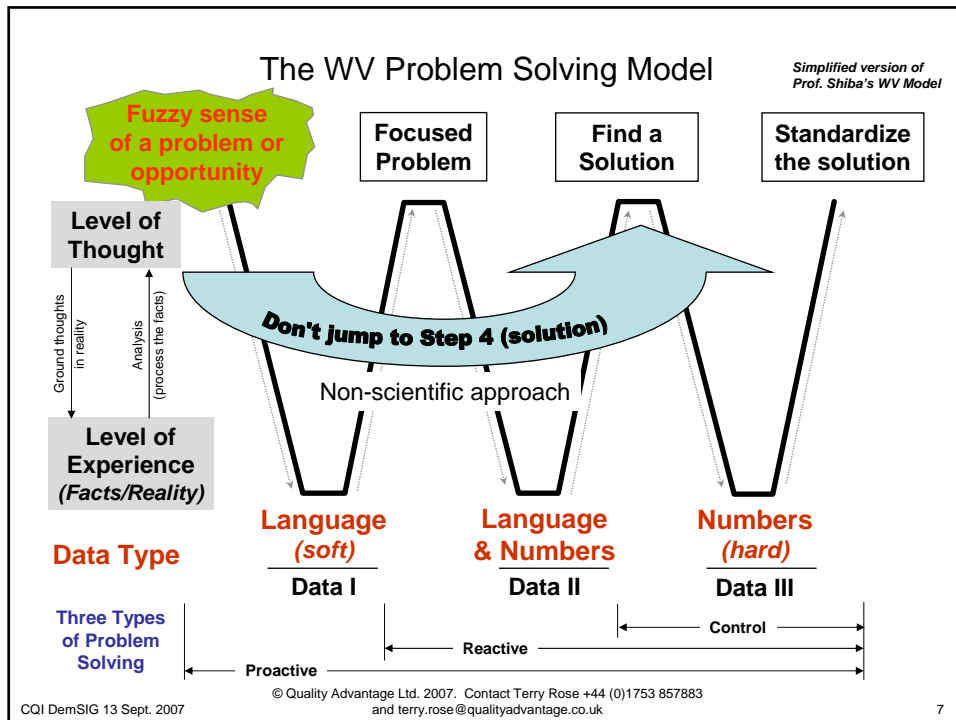
- Yet there is another type of data that is perhaps more prevalent and pervasive than numbers
- I would suggest that **language** data is used more than numbers data. E.g.
  - When decisions have to be made (e.g. business planning)
  - When we try to better understand our customers (e.g. Sales)
  - When we meet with our colleagues to solve a problem
  - When we assess a supplier
  - When **we** are assessed by our customers or our boss
  - When we ask for Customer feedback
- So how come little emphasis has been placed on helping individuals, businesses and organisations to collect, analyse and understand **language data**?



## Numbers and Language

- We might have a reasonable grasp of statistics –
- But how many of us understand the basics of **semantics**?
- We may know how to aggregate and disaggregate the numbers -
- But how many of us can go up and down the **ladder of abstraction**?
- We may know the difference between attribute and variable data -
- But how many of us can easily distinguish between **Language of Affection and Language of Report**?
- We can draw bar charts and even Control Charts –
- But how many of us are equally proficient using **Language Processing Diagrams**?
- We have well defined processes for our important operations & services –
- But how many companies have a well defined **Voice of the Customer process**?





## Semantics:

*The fundamental Concepts applied to problem solving & decision making*

**Deming Prize Citation**  
...for introducing **semantics** to problem solving processes and developing the process for **soft data**

### Why is Semantics relevant?

*Because applying the tools & techniques of semantics:*

- **Can help us communicate more effectively**
  - Exchange information & ideas and come to a common understanding
- **Can impact our ability to manage by facts**
  - Many problems we encounter are described by language data
  - Language data is often used as the basis for business decisions and problem solving

***There is a delicate connection between words and facts***

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## A word about Semantics

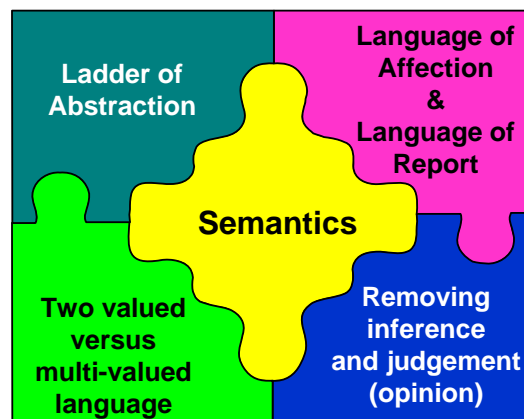
Semantics is the study of how people use language to communicate

“Management aint no good round ‘ere.”

For purposes of **management by facts**:

- We are not interested in grammatical correctness
- We are interested in gaining a common, verifiable meaning

To use language for  
**PROBLEM SOLVING & DECISION MAKING**  
we need an understanding of 4 semantic concepts



*These concepts  
have been adapted  
from the book  
Language in  
Thought and  
Action  
by S.I. Hayakawa &  
Alan R. Hayakawa*

## LANGUAGE of AFFECTION & LANGUAGE of REPORT

Language of Affection & Language of Report



**Language of Affection** conveys emotional information and is based on opinion

**Language of Report** conveys logical, fact-based information that can be verified



Examples:

**Affection:** Mary is good at mathematics

**Report:** Mary got an A\* in her GCSE maths exam

**Affection:** My manager was angry

**Report:** My manager slammed his fist on the desk

Both types of language have their place

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## Check your Understanding

Language of Affection & Language of Report

- Q1. What type of language would you expect the police to use when reporting the details of a crime?
- Q2. What type of language would be used by the victim of a crime when giving evidence in the witness box?
- Q3. What type of language might you use when calling a customer hot line to complain for the third time about the non arrival of a service engineer?
- Q4. What type of language would you expect to be used at a meeting to decide Business Strategy?
- Q5. What type of language would you expect to be used at a motivational team meeting?

Any examples you would like to share?

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## REMOVING INFERENCE

Removing inference and judgement (opinion)

**Inference** is a conclusion based on an observation of a fact



Examples:

**Fact:** He drives a Rolls-Royce.  
**Inference:** He is wealthy.


**Fact:** I hear a ringing squeal when applying the brakes.  
**Inference:** The brake pads are worn.

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## REMOVING JUDGMENT

Removing inference and judgement (opinion)

**Judgment** is an expression of approval or disapproval of an object, person or event



Examples:

**Judgment:** This is a popular product.  
**Fact:** This product has achieved 25% market share in the first year.

**Judgment:** He is a genius.  
**Fact:** He has an IQ of 150.

**Typical judgmental words: good, bad, acceptable, poor, too little, too much**

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## TWO VALUED vs MULTI-VALUE

Two valued versus multi-valued

**Two-Valued:**  
The room is hot.  
The room is cold.

hot

cold

Beware of two-valued thinking

on  
  
off

two-valued switch

**Multi-Valued:**  
The room temperature is 75°F

on  
  
off

multi-valued dimmer switch

Two-Valued Example: Managers don't practice Meetings Management techniques

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## LADDER of ABSTRACTION

Ladder of Abstraction

Used to convert Language of Affection into Language of Report

- When looking for facts: "Go down"
- When looking for concepts: "Go up"
- 1 rung at a time

High level of abstraction

Farm Assets

Buildings

Livestock

Vehicles

Chickens

Cows

Sheep

Goats

Jane

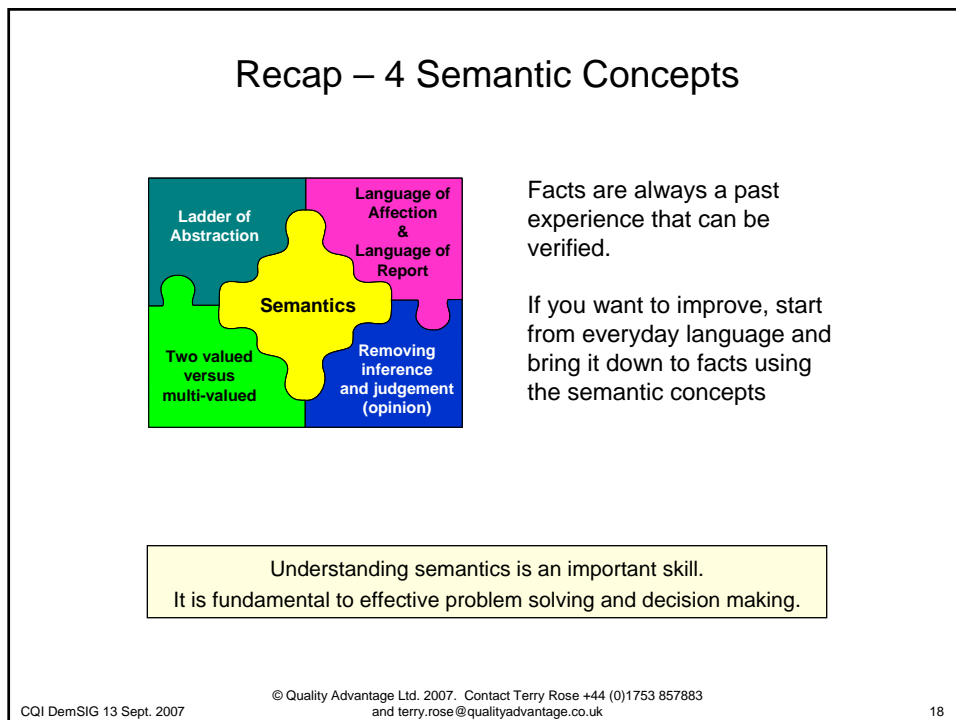
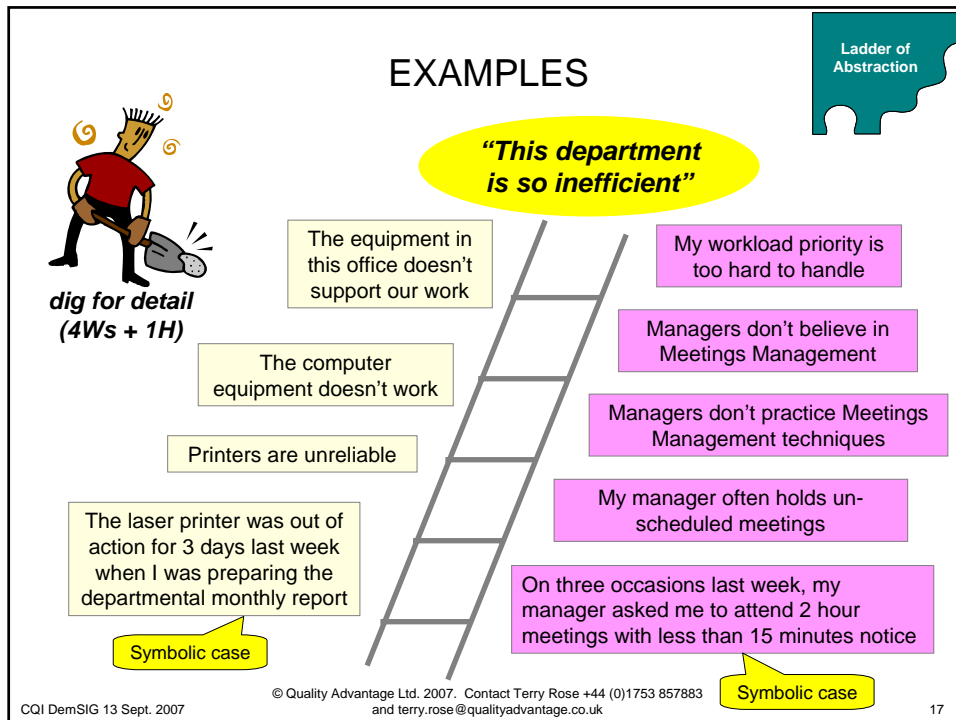
Ludmilla

Bessie

High level of abstraction

Low level of abstraction

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## A Typical Meeting?

“The VX2000 is a fine product.”

“Yes, it’s selling very well.”

“Jim is the best salesperson we have.”

“There’s certainly no need to increase our Sales & Marketing spend.”

“Right, the Marketing budget was too high anyway.”

“So we can spend the remaining budget on improving the product.”

“Yes. That will significantly increase market share.”

“Good. We’re all agreed then.”



Q1. What type of language is used in this meeting?


Q2. Can you detect any specific examples of inference, judgement (opinion) and two valued language?

Whole meetings can go on this way with opinion after opinion stated as facts and used to make important business decisions



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## Introducing the Language Processing (LP) Method

A tool for organising qualitative (language) data  
to gain an accurate, agreed understanding of a  
situation and to create new insight

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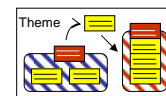
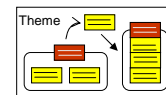
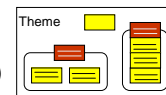
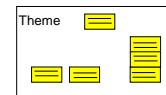
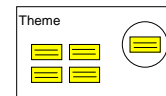
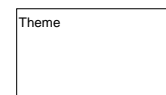
## The Language Processing (LP) Method

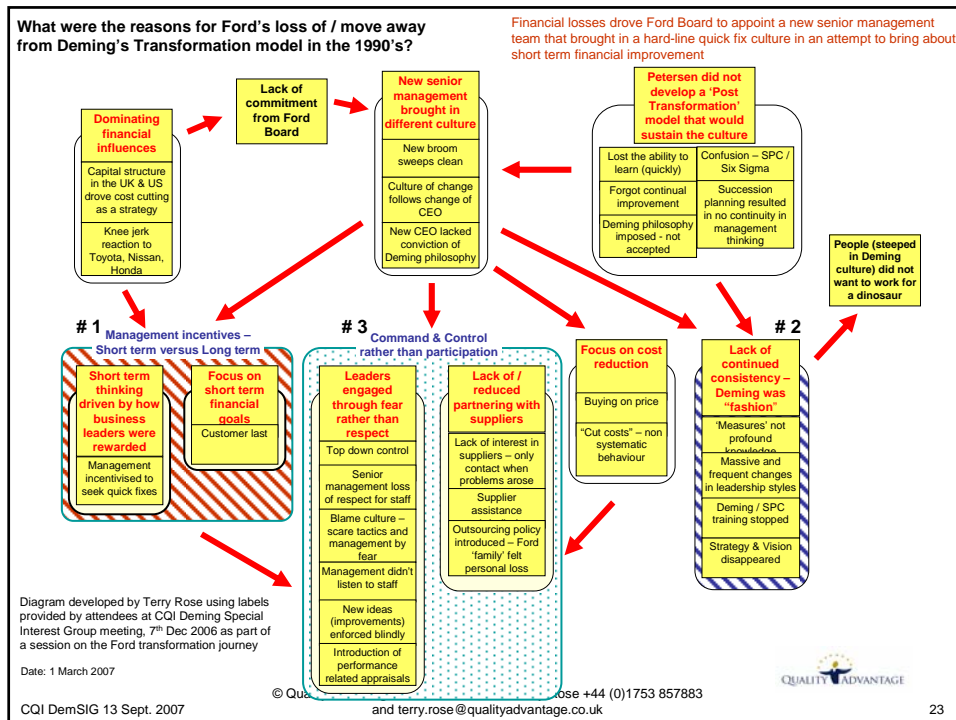
- Origin of the LP method exists in Jiro Kawakita's work in the 1950s
  - Kawakita developed a method of gathering and analysing language data as a basis for problem solving
  - The method gained considerable recognition in the Japanese business community as the KJ Method
- Later, JUSE developed a simplified version of the KJ Method which they called an Affinity Diagram
- In 1990, Shoji Sheba began teaching a more step-by-step version of the KJ Method which he later called the LP Method
- The LP Method is more powerful than an Affinity Diagram. It can help a team / group:
  - Gain an accurate, agreed, understanding of a situation
  - Create new insights

'We use the Affinity diagram when the precision and richness of the LP method is not needed.'  
 Shiba & Walden, Four Practical Revolutions in Management

## Main Steps of the LP Method

- Step 1: Agree on a Topic (Theme)  
Typically a "What" or a "Why" question
- Step 2: Individuals write labels (Language of Report) answering the question in the Theme.  
The team scrub each label for understanding
- Step 3: The team group similar labels (by image – not words)
- Step 4: 'Headers' are generated for groupings at levels of abstraction (1<sup>st</sup> level: Red. 2<sup>nd</sup> level: Blue. 3<sup>rd</sup> level: Black)
- Step 5: Layout groups and show relationships
- Step 6: Vote on the most important issues and draw conclusions





In what situations has Language Processing been successfully applied?

**In the Private, Public & Voluntary Sectors:**

Capturing the Voice of the Customer (VOC Process)

Business Improvement Projects (Why is this project important?)

Business Planning

Internal / External Auditing

Business meetings

Networking

New Product Development

Round Table Meeting

Breakthrough Management

Meeting Strength & Weaknesses

Staff Performance Appraisals

Meetings Facilitation

Presidential Diagnosis

Root Cause Analysis

QUALITY ADVANTAGE

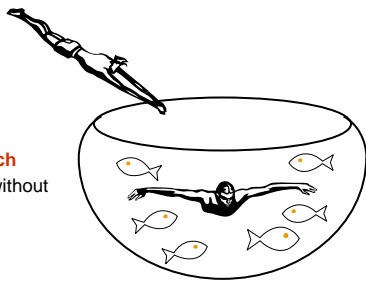
Was the Desired Outcome for this Session achieved?

1. To what your appetite for the importance of language processing
2. You just can't wait to try it yourself

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**Part 2. Jump into the fishbowl**



**The Intuitive Approach**  
Swim in the fishbowl without logic or preconceived hypothesis

**Reflect on the Experience**  
Try to understand.  
Use the LP Method

Your chance to use Language Processing

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## The LP Method

Step 1: Agree on a Topic (Theme)  
**Why is the DemSIG Transformation project important?**

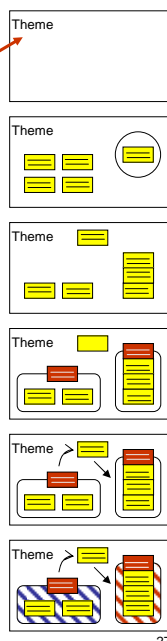
Step 2: Individuals write data labels (Language of Report).  
 The team **scrub** each label for understanding. No critiquing or analysis of label content

Step 3: The team **group** similar labels (by image – not words)

Step 4: Generate 'headers' for groupings at levels of abstraction  
 (1<sup>st</sup> level: Red. 2<sup>nd</sup> level: Blue. 3<sup>rd</sup> level: Black)

Step 5: Layout groups and show relationships

Step 6: Vote on the most important issues and draw conclusions



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## Label Writing Guidelines

- Use a BLACK pen or pencil
- Labels should answer the question in the Theme
- One thought and one sentence per label
- The aim is to develop labels that are at a **LOW LEVEL OF ABSTRACTION**
  - impart the same meaning to anyone that reads them*
- Write your initials at the bottom right hand corner

5" x 3" Yellow Post-it® Note




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## Back-up Slides

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### Putting Language Processing Into Context *The 3 Paradigms of Management*

*Based on a table used by Prof. Shiba*

	<b>CONTROL</b>	<b>INCREMENTAL</b>	<b>BREAKTHROUGH</b>
			
Business logic	Control process	Customer satisfaction	New market value
Responsibility	Manager / supervisor / team leader	Everyone in the organisation	Top managers
Data type	Numbers	<b>Numbers and Language</b>	<b>Image and Language</b>
Processes	SDCA Standardisation Voice of the Process	PDCA 7-Step problem Solving VOC, VOP	Discovery Processes
Skills & Capabilities	Process Mapping, Statistical analysis	Kaizen methods, <b>Language Processing</b>	Intuitive observation, <b>Language Processing</b>

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