# ATT-Meta Approach: More Examples

John Barnden

School of Computer Science
University of Birmingham
UK

for talk at University of East Anglia, March 2015

# *Internal-Insistence Example*

"A voice inside Mary was insisting that Mick was adorable."

- One major connotation:

  *While some aspect of Mary's thinking supported the idea that Mick was adorable, some other aspect contradicted this.*

# *Inferential Connection to Mappings*

- A source-side scenario is constructed within a PRETENCE environment.
  In this scenario:
  - Mary contains an inner community of persons.
  - The mentioned voice belongs to a person in that community.
  - This person believes that Mick is adorable.
  - There is also another inner person of Mary engaged in a conversation with the first one.
  - The first inner person is insisting that Mick is adorable, and believes this.
  - The second inner person has said something that contradicts this (hence the need for the first inner person to insist). The second inner person believes that Mick is not adorable.
- This scenario is derived from

  *ancillary assumptions* embodying familiarity with the metaphorical idea of a person containing a (usually small) community of people

  *within-pretence, within-source-scenario inferences* about real conversations and mental states of conversants.

# *Inferential Connection to Mappings, contd*

The only *mapping* needed is

IF (IN REALITY) P is a person
AND (IN THE PRETENCE) C is a community of people
AND C is physically-in P
THEN {presumably}

(IN PRETENCE) some member of C believing X is at least evidenced

corresponds to

(IN REALITY) P believing X is at least evidenced

When the correspondence is created, it is used to infer (from the first inner person) that Mary believes there is evidence that Mick IS adorable and (from the second inner person) that Mary believes that there is evidence that Mick is NOT adorable.

The IF part serves as a set of *guards* that, intuitively, detect the presence of the view of MIND AS CONTAINING INNER COMMUNITY of PERSONS.

# *Ancillary Assumptions*

The system can use rules called *ancillary assumptions* concerning the view of MIND AS CONTAINING INNER COMMUNITY of PERSONS.

Two are:

IF (IN REALITY) P is a person
AND (IN THE PRETENCE) Q is a person
AND Q is physically-in P
THEN {presumably}
(IN PRETENCE) P has an inner community.

IF (IN REALITY) P is a person
AND (IN THE PRETENCE) P has an inner community
AND (IN THE PRETENCE) Q is a person
AND Q is physically-in P
THEN {presumably}
(IN PRETENCE) Q is in P's inner community.

# *Two Conversation Rules*

[belongs to reality; can be used in any space]

IF P is a person
AND P says that Z in a positive manner

THEN {presumably}

P believes that Z presumably holds.

[belongs to reality; can be used in any space]

IF P is a person AND L is P's interlocutor
AND P says that Z insistingly

THEN {presumably}

L says NOT-Z in a positive manner.

# *Lazy Car*

*"John's car is on holiday."*

[simplification of an example implemented in system]

cf. "Your car is on holiday too!" seen on a hotel website.

- Within-pretence reasoning:

Because the car is on holiday, it is a person.

Because the person(/car) is on holiday, she[/he/its] is not going to work.

Because she is not at work, she is *persistently not doing her normal function.*

# *Lazy Car, contd.*

- Assume mappings:

  IF [pretend] entity X corresponds to [real] entity Y
  THEN {presumably}
  [pretend] *doing-normal-function*(X) corresponds to [real] *doing-normal-function*(Y).

  IF [pretend] episode E corresponds to [real] episode F
  THEN {presumably}
  [pretend] COMPLEMENT-E corresponds to [real] COMPLEMENT-F.

  IF [pretend] activity A corresponds to [real] activity B
  THEN {presumably}
  [pretend] *time-aspect*(A,T) corresponds to [real] *time-aspect*(B,T).

- Then can infer that in reality the car is *persistently not doing its normal function.*

  (NB: "Agent" is used in very general sense, not a cognition-implying sense.)

# *Lazy Contemplative Car*

*"John's car thinks it's on holiday."*

[implemented in system]

Real-discourse examples of cars' cognitive powers:

*"the rpm's start to drop and the car acts like it wants to die"*

*"I thought that B0189 and B2646 may have something to do with why the car believes it should have the headlights on in the daytime."*

- Within-pretence reasoning much as above, except that:

Because the car thinks she's on holiday, she thinks she is not required to go to work. [Simulative reasoning within the car's belief space.]

Because the car thinks she is not required to go to work then (by default) she is not going to work.

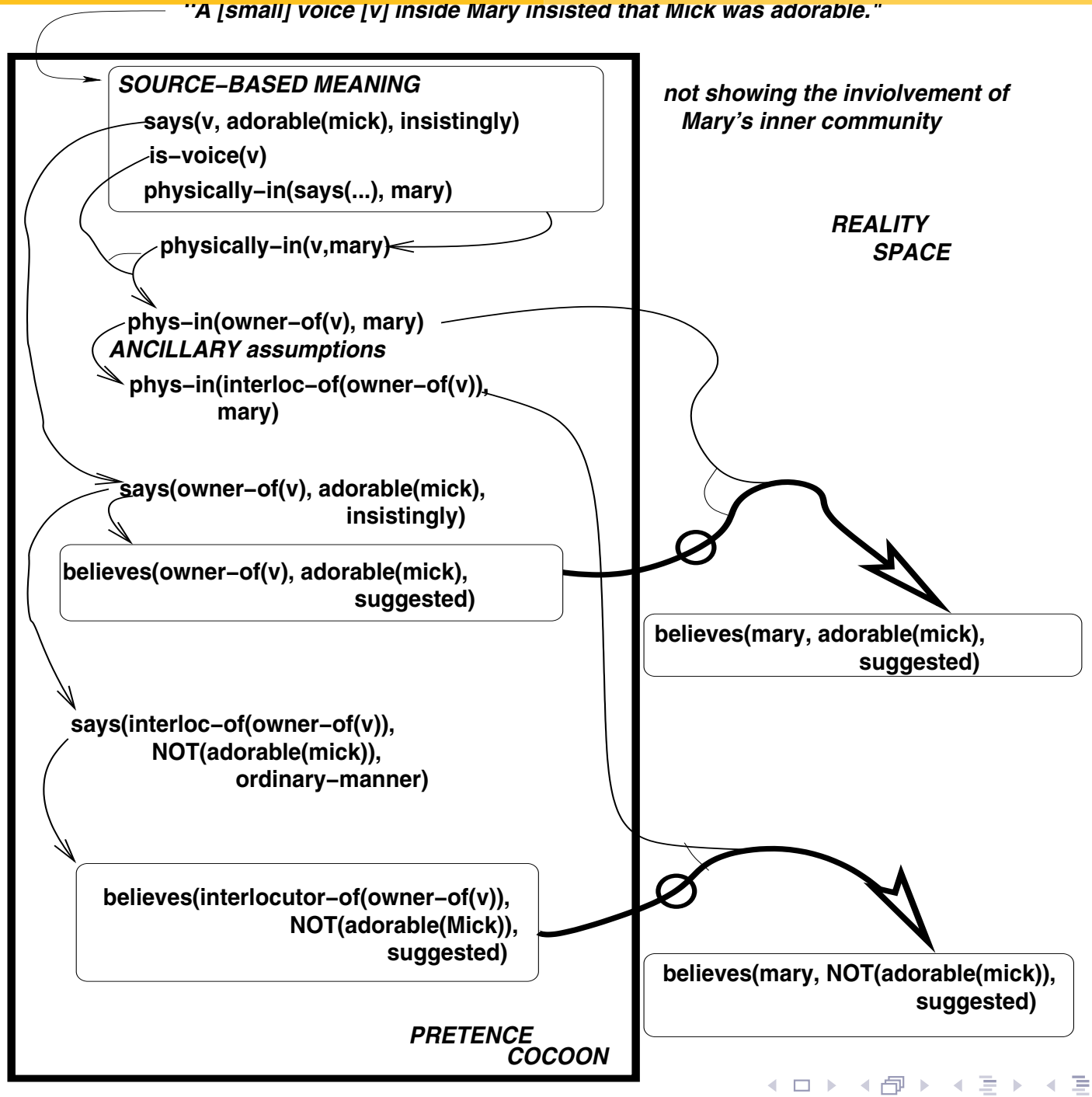
# A Conversation Rule: Prolog Form

```
rule(
     the_episode(bel_states, null_time, P, Z, presumed),

         [belongs_to_reality,

          the_episode(being_person, P),
          the_episode(saying, P, Z, M),
          the_episode(being_positive_manner, M)
         ],

     presumed, r_believe_if_say_positively).
```


"A [small] voice [v] inside Mary insisted that Mick was adorable."
SOURCE–BASED MEANING
says(v, adorable(mick), insistingly)
is–voice(v)
physically–in(says(...), mary)
not showing the inviolvement of Mary's inner community
REALITY SPACE
physically–in(v,mary)
phys–in(owner–of(v), mary)
ANCILLARY assumptions
phys–in(interloc–of(owner–of(v)), mary)
says(owner–of(v), adorable(mick), insistingly)
believes(owner–of(v), adorable(mick), suggested)
believes(mary, adorable(mick), suggested)
says(interloc–of(owner–of(v)), NOT(adorable(mick)), ordinary–manner)
believes(interlocutor–of(owner–of(v)), NOT(adorable(Mick)), suggested)
believes(mary, NOT(adorable(mick)), suggested)
PRETENCE COCOON

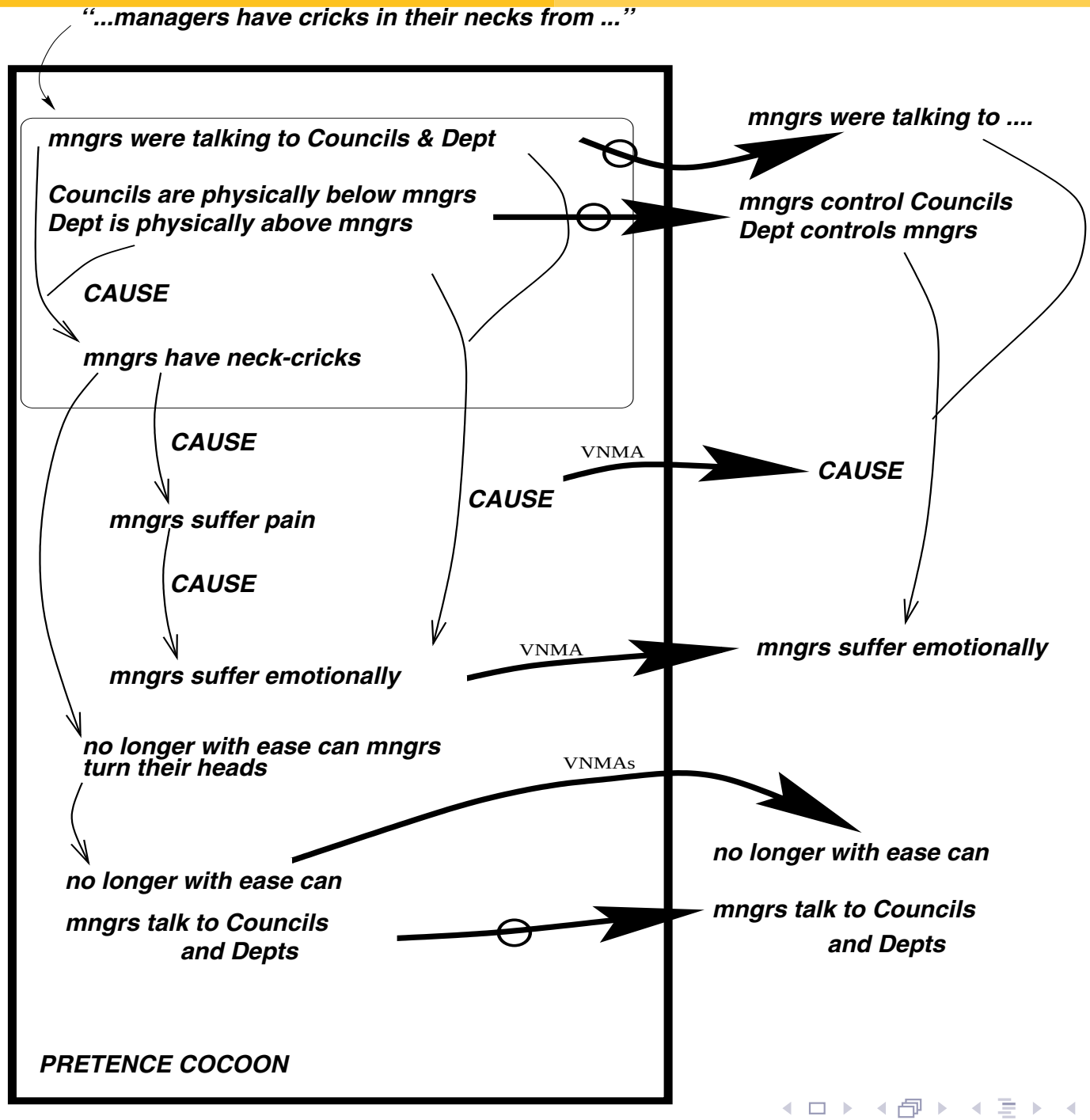
# *Car Thinks Boot Is Open*

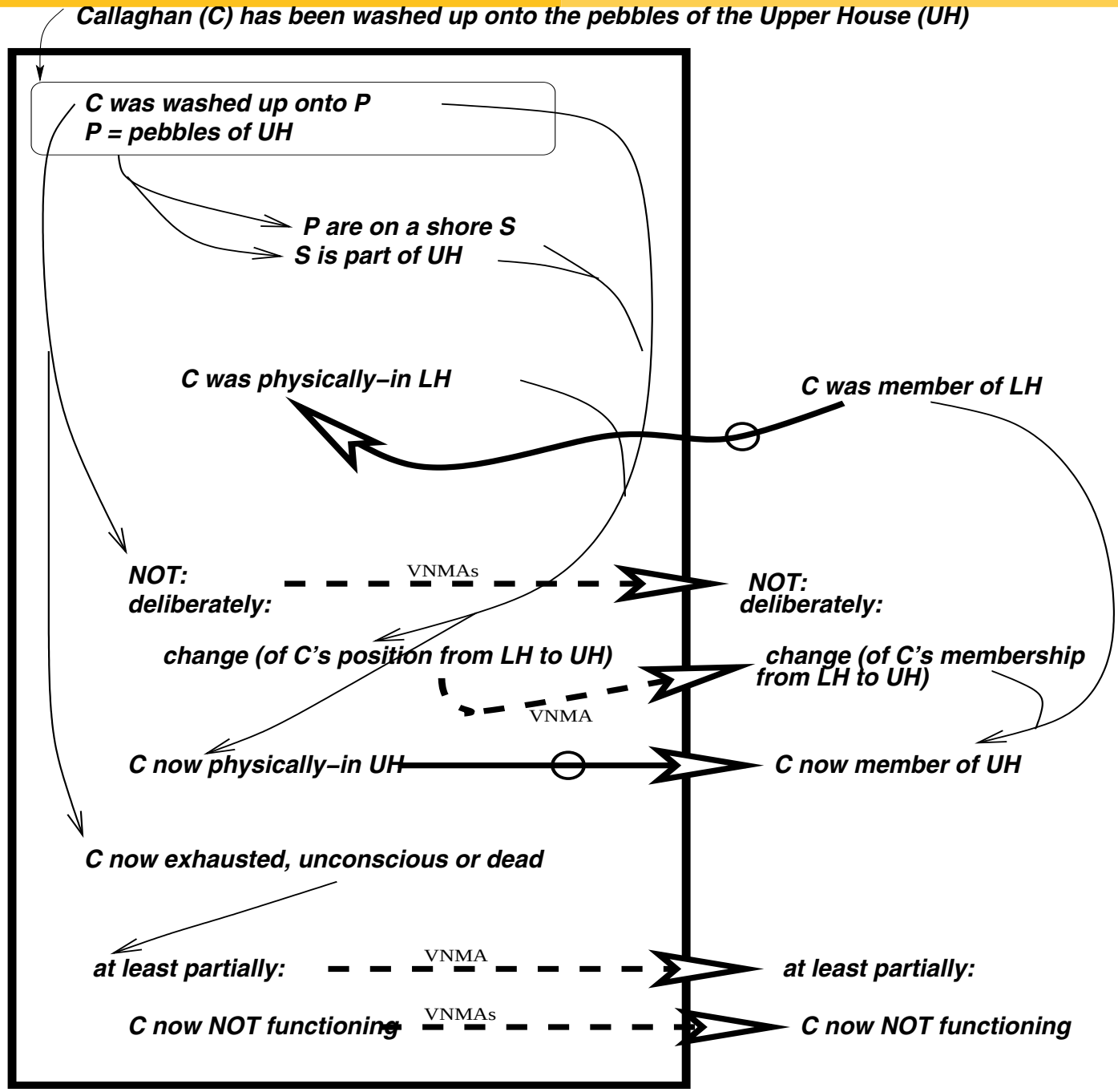
- Slide title is a blog item title on `http://www.audi-sport.net/vb/audi-s4-a4-a4-cab-b7-chassis/109109-car-thinks-boot-open.html`

- The mental state VNMA says that IF a cognitive agent in the real situation corresponds to a *cognitive agent* in the pretence, then their mental states correspond, *modulo* translation of their contents according to correspondences.

- But this doesn't apply in present example, because in reality the car is NOT a cognitive agent, even though it IS a cognitive agent in the pretence.

- There can be a view-specific mapping between an artefact thinking something in the pretence and the artefact behaving in reality as if the something were true.


"...managers have cricks in their necks from ..."
mngrs were talking to Councils & Dept
Councils are physically below mngrs
Dept is physically above mngrs
CAUSE
mngrs have neck-cricks
CAUSE
mngrs suffer pain
CAUSE
mngrs suffer emotionally
no longer with ease can mngrs turn their heads
no longer with ease can
mngrs talk to Councils and Depts
PRETENCE COCOON
mngrs were talking to ....
mngrs control Councils
Dept controls mngrs
VNMA
CAUSE
CAUSE
VNMA
mngrs suffer emotionally
VNMAs
no longer with ease can
mngrs talk to Councils and Depts


Callaghan (C) has been washed up onto the pebbles of the Upper House (UH)
C was washed up onto P
P = pebbles of UH
P are on a shore S
S is part of UH
C was physically–in LH
C was member of LH
NOT:
deliberately:
VNMAs
NOT:
deliberately:
change (of C's position from LH to UH)
change (of C's membership from LH to UH)
VNMA
C now physically–in UH
C now member of UH
C now exhausted, unconscious or dead
at least partially:
VNMA
at least partially:
C now NOT functioning
VNMAs
C now NOT functioning
PRETENCE COCOON