The default values of the problem schema contain information such as, if nothing is said to the contrary, the pulley will be light and frictionless. Also, it is assumed the pulley is fixed if nothing is said to the contrary.

The following pulley system schema (in PROLOG (5)) will partially represent this situation:

```
Schemal(pulleys, sys, pulley, string, direction, direction2, time),
  (cue(stringys, string, leftend, rightend, time)),
  (problemtype(pulley), particle(pulley),
   include(leftend, direction, rightend),
   incline(rightend, direction, leftend, time),
   tension(leftend, T, time) :- friction(pulley, string, zero, tension(string, T, time)),
   tension(rightend, T, time) :- friction(pulley, zero, tension(string, T, time)),
   friction(pulley, zero), inter(string, T, time),
   fixed-contact(pulley, earth, time) :-
     reposition(p), distance(p, each),
     null(horn(fixed-contact(pulley, pt, time)))).
```

Each schema, as above, consists of four parts: (1) the key, e.g., pulleys(...), used for calling in the appropriate schema.
(2) the declaration, e.g., cue(stringys...) list of subgoals for linking this schema to information in the database or declaring new information.
(3) the assertions, e.g., tension(...) for facts or inferences in the database.
(4) the definition, e.g., friction(...) a list of facts or inferences asserted as default values.

The problem schema represents the condition driven aspect of the MECHE program. It asserts the facts, inferences and defaults that make up the semantic content of the problem domain. The MECHE system is also goal driven. A single means-end analysis is incorporated in an algorithm that takes a sought unknown (the acceleration of the man) and by creating intermediate unknowns (the tension in the string) generates a linearly independent set of equations that enable the program to solve the problem. MECHE is both a condition and goal driven system.

The problem-schema outlined in this paper are developed further in (4). These human protocols are presented and used to justify the pulley problem schemata. The MECHE system is also discussed as a model of human performance in the solution of pulley problems.

References