

**MODELING THE DYNAMICS OF A FAMILY
IN CRISIS**

RALPH LEVINE JANE PEARSON

AND

NICHOLAS IALONGO

**DEPARTMENT OF PSYCHOLOGY
MICHIGAN STATE UNIVERSITY**

ABSTRACT

A MODEL OF THE DYNAMICS OF A FAMILY PROBLEM WAS DEVELOPED AS A PROTOTYPE OF FUTURE WORK IN FAMILY THERAPY. IN THIS SITUATION, A FAMILY WAS IN CRISIS OVER THE PROBLEM OF MANAGING THE SON'S ILLNESS. THE FATHER REFUSED TO RECOGNIZE THE SEVERITY OF THE DISEASE, WHILE THE MOTHER BEGRUDGEDLY TOOK RESPONSIBILITY FOR THE CARE OF THE CHILD.

THE MODEL DESCRIBES THE DYNAMICS UNDERLYING THE MUTUAL ANGER BETWEEN THE PARENTS, THE GUILT OF THE FATHER, AND THE EFFECTS OF THERAPEUTIC INTERVENTIONS ON THIS FAMILY SYSTEM. THE OUTPUT OF THE MODEL WAS OSCILLATORY IN NATURE. THE TIMING OF THESE OSCILLATIONS OF THE PARENTS ANGER AND THE FATHER'S GUILT MATCHED THE SEQUENCE OF EMOTIONS ACTUALLY OBSERVED BY THE CLINICAL TEAM WHEN DEALING WITH THIS FAMILY.

THE MODELER, WHO WAS NOT IN POSSESSION OF ALL THE FACTS, PREDICTED A RELAPSE OF THE FATHER'S BEHAVIOR AND A RECYCLING OF BOUTS OF ANGER BETWEEN PARENTS AFTER ABOUT SIX MONTHS FOLLOWING THE TERMINATION OF THERAPY. THE THERAPISTS SUBSTANTIATED THIS PREDICTION, GIVING CONFIDENCE IN THE MODEL.

INTRODUCTION

PROBLEM:

THE SON: "POINDEXTER" WAS TWELVE, HAD DIABETES, AND WAS NOT COMPLYING WITH HIS DIABETES REGIMEN.

THE MOTHER: "MRS. LITTLE" SPENT AN INCREASING AMOUNT OF TIME WORKING WITH HER SON. SHE BECAME PROGRESSIVELY ANGRY WITH HER HUSBAND FOR NOT HELPING TO MANAGE THEIR SON'S DIABETES REGIMEN.

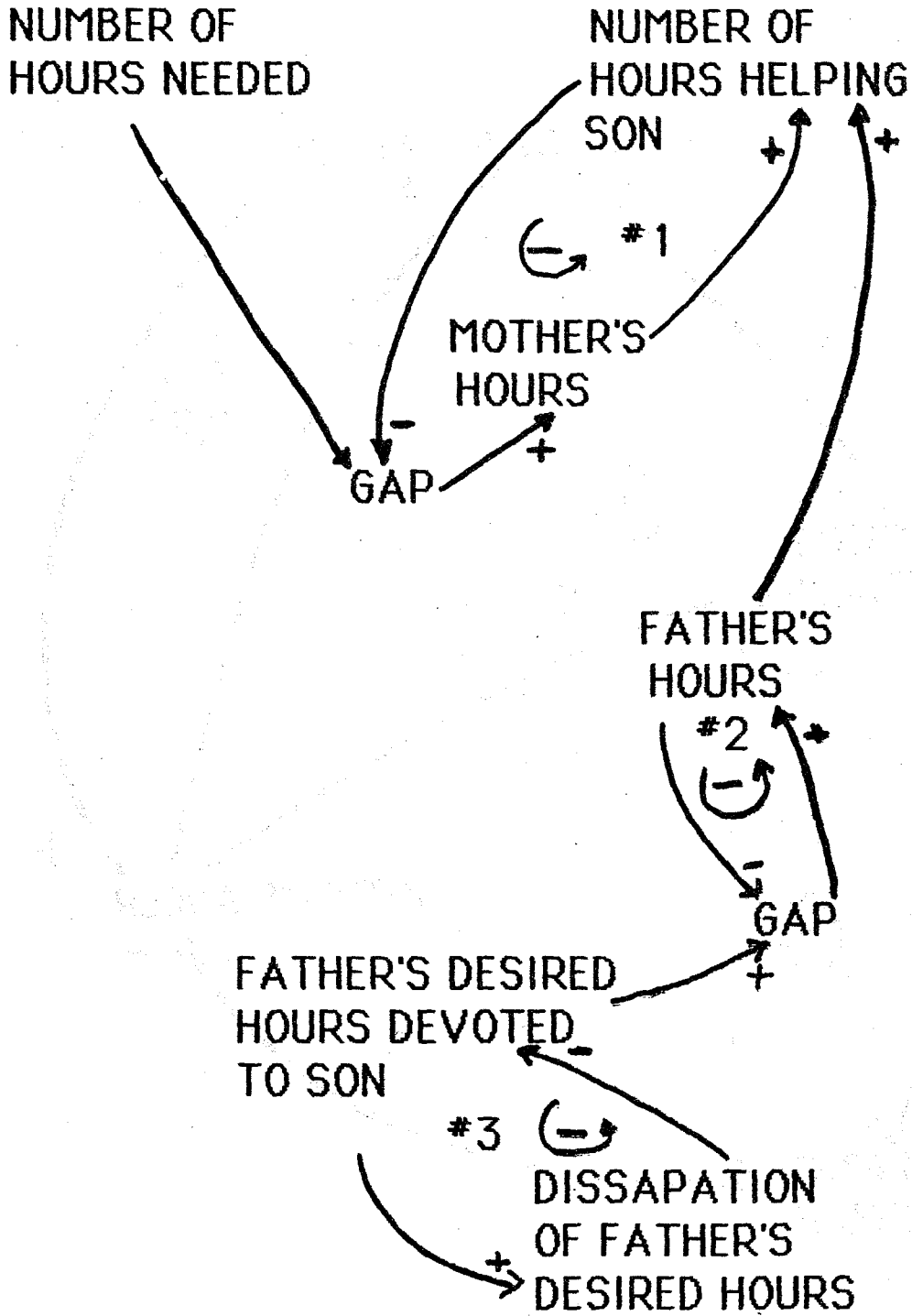
THE FATHER: "MR. LITTLE" BECAME QUITE ANGRY WHEN PRESSURED BY HIS WIFE TO WORK WITH THEIR SON.

CLINICAL INTERVENTION

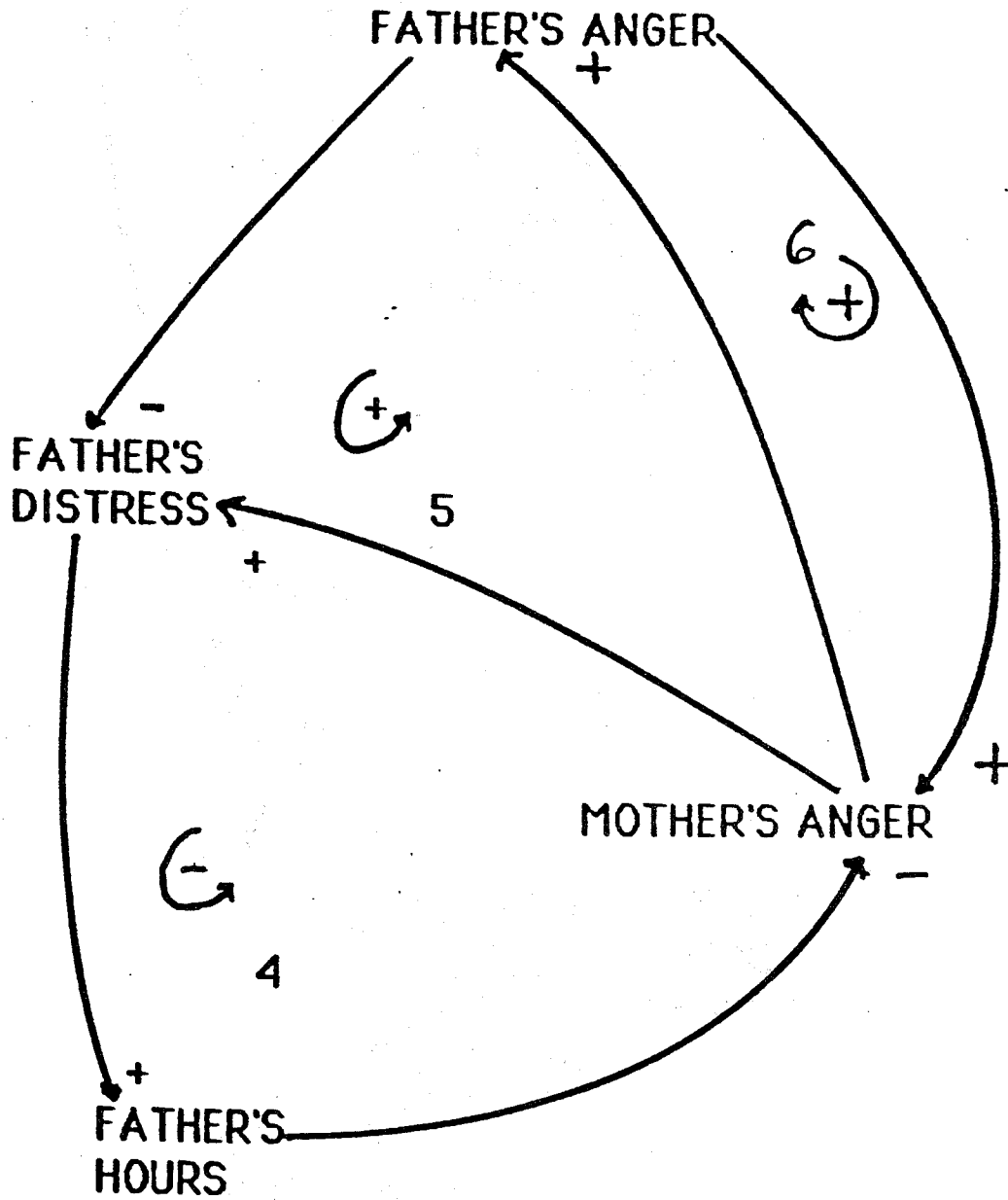
THE MOTHER'S LEVEL OF ANGER WAS SO HIGH THAT SHE HAD THOUGHTS OF ABANDONING THE FAMILY. INSTEAD, MRS. LITTLE SOUGHT AID FROM A TEAM OF PSYCHOLOGISTS ASSOCIATED WITH A DIABETES CLINIC.

THE CLINICAL TEAM BEGAN TO WORK ON LOWERING THE MOTHER'S LEVEL OF ANGER AND ATTEMPTED TO INCREASE THE FATHER'S LEVEL OF AWARENESS CONCERNING HOW HE COULD FULFILL HIS RESPONSIBILITIES TOWARD HIS SON. THE CLINICAL INTERVENTION APPEARED TO BE A SUCCESS. SIX MONTHS AFTER THE TERMINATION OF THERAPY, THE FAMILY WAS SEEN AGAIN BRIEFLY, BECAUSE THE FATHER HAD GONE BACK TO HIS OLD HABITS. THE TEAM WORKED ON BUILDING IN REINFORCEMENTS FOR THE FATHER'S HELPING BEHAVIOR, WHICH AIDED IN PERMANENTLY MAINTAINING A HIGH LEVEL OF COOPERATION BETWEEN THE PARENTS.

THE MODEL WAS FORMULATED POS-HOC TO DESCRIBE THE DYNAMICS OF THE CASE. THIS APPROACH TO MODELING FAMILY DYNAMICS ALSO ALLOWS ONE TO EMBED MANY PSYCHOLOGICAL THEORIES INTO A NETWORK OF LOOP PROCESSES. IN ADDITION SYSTEM DYNAMICS MODELS CAN ALSO POINT OUT WHAT INTERVENTIONS WILL BE SUCCESSFUL AS WELL AS WHY OTHER PROPOSED THERAPEUTIC INTERVENTIONS MIGHT FAIL.

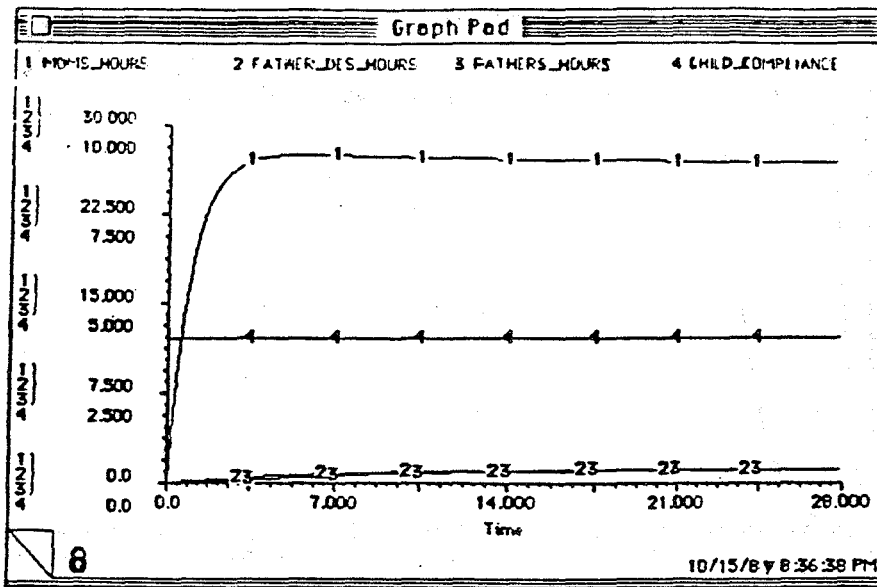


DYNAMIC HYPOTHESIS CONCERNING
HELPING SON DEAL WITH ILLNESS



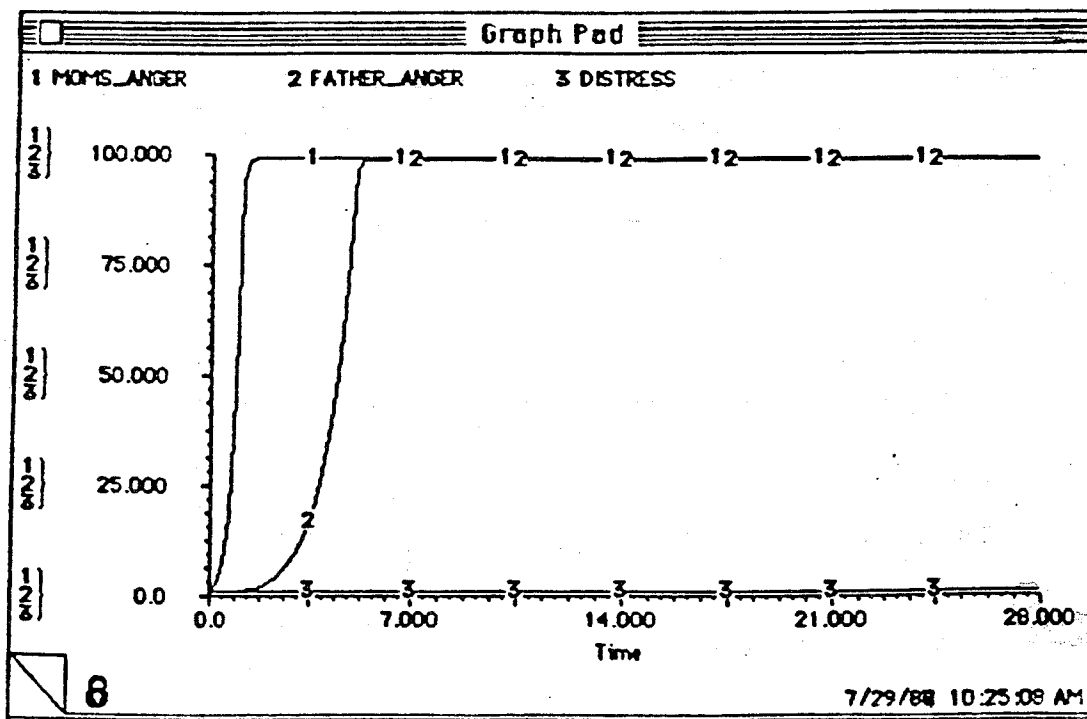
DYNAMIC HYPOTHESES CONCERNING
EMOTIONAL INTERACTIONS

1 MOM'S HOURS 2 FATHER'S HOURS
3. FATHER'S HOURS 4. CHILD'S COMPLIANCE



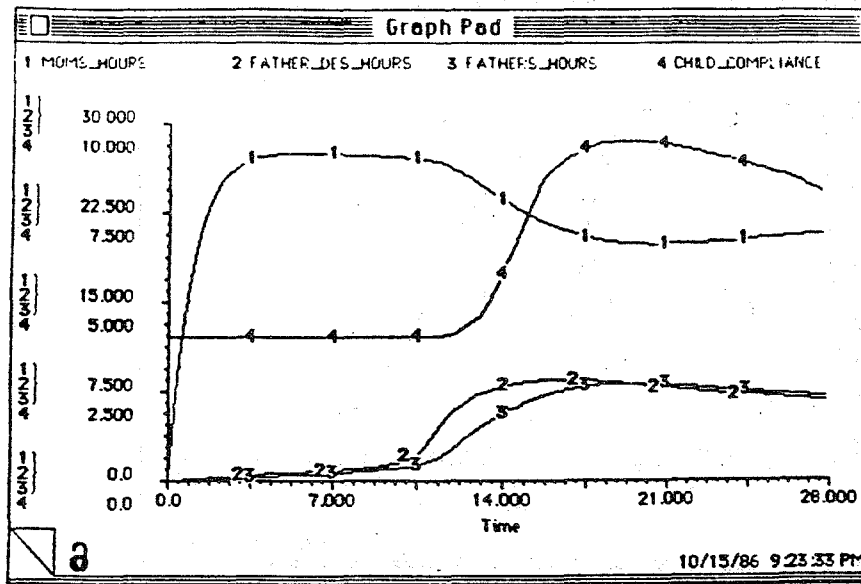
NO INTERVENTION: BEHAVIORAL ASPECTS

- 1. MOM'S ANGER
- 2. FATHER'S ANGER
- 3. FATHER'S DISTRESS



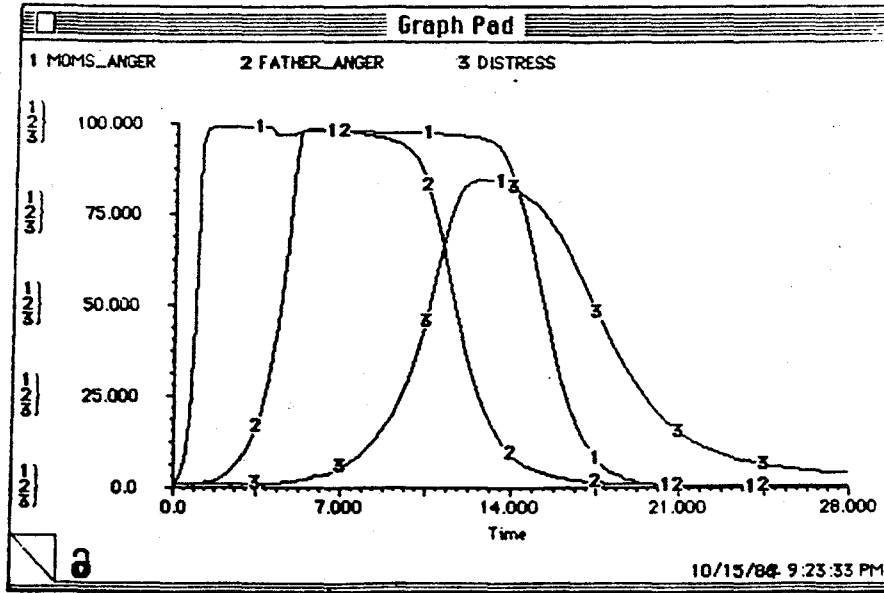
NO INTERVENTION: EMOTIONAL ASPECTS

1 MOM'S HOURS 2 FATHER'S HOURS
3. FATHER'S HOURS 4. CHILD'S COMPLIANCE



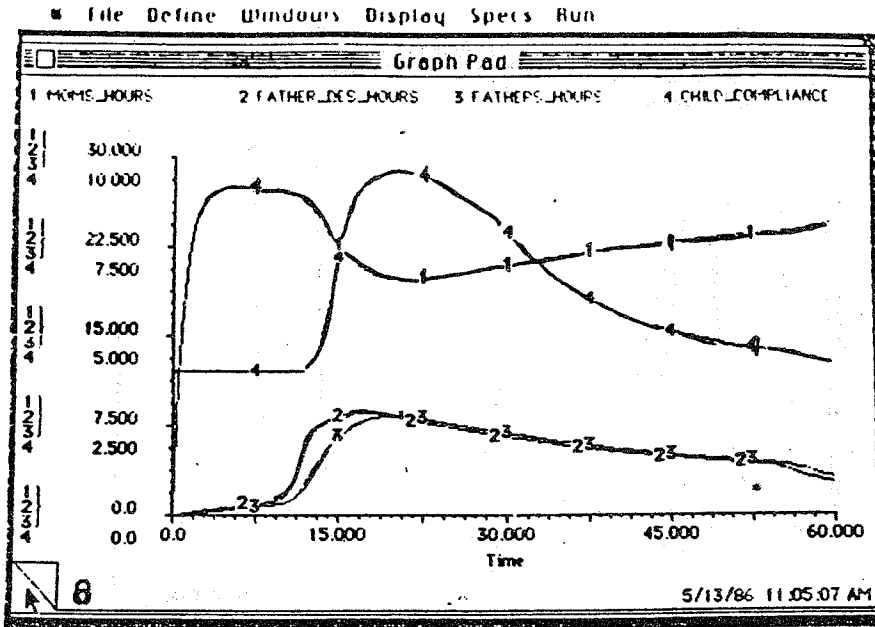
WITH THERAPY: BEHAVIORAL ASPECTS

- 1. MOM'S ANGER
- 2. FATHER'S ANGER
- 3. FATHER'S DISTRESS



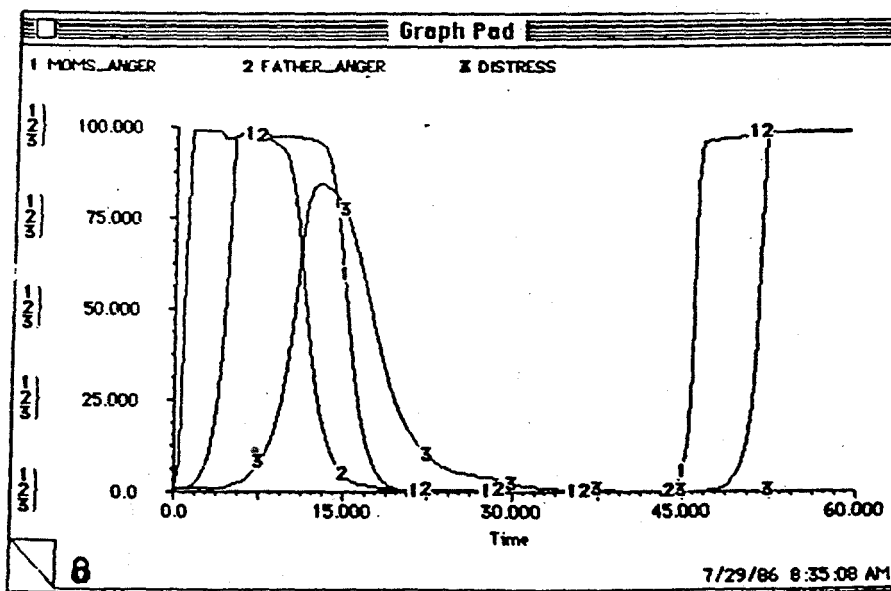
WITH THERAPY: EMOTIONAL ASPECTS

- 1 MOM'S HOURS
- 2 FATHER'S HOURS
- 3. FATHER'S HOURS
- 4. CHILD'S COMPLIANCE



LONGER TIME HORIZON: BEHAVIOR

1 MOM'S HOURS 2 FATHER'S HOURS
3. FATHER'S HOURS 4. CHILD'S COMPLIANCE



LONGER TIME HORIZON: EMOTIONS

SUMMARY AND CONCLUSIONS

THIS IS A RELATIVELY NEW APPROACH TO FAMILY THERAPY. THE MODEL PROVIDED A DEEPER INSIGHT INTO THE DYNAMICS OF FAMILY PROBLEMS. CONCERNING THE TECHNICAL ASPECTS OF MODELING PSYCHOLOGICAL PROCESSES, AS A FIRST APPROXIMATION, WE TREATED MANY OF THE PSYCHOLOGICAL VARIABLES, SUCH AS ANGER AND DISTRESS, AND VARIOUS GOALS OR EXPECTATIONS AS CONSERVED QUANTITIES. FOR EXAMPLE, THE FATHER'S DESIRED NUMBER OF HOURS WORKING WITH THE CHILD COULD ERODE OR DISSIPATE OVER TIME. THIS WAS CAPTURED IN TERMS OF A NEGATIVE LOOP, A SELF-GENERATED FLOWTHROUGH PROCESS. IN ADDITION, WHEN APPROPRIATE, WE USED PERCEPTUAL DELAYS (SMOOTHS) TO CAPTURE THE DYNAMICS OF OTHER PSYCHOLOGICAL VARIABLES.

IN THE FUTURE, WE PLAN TO APPLY SYSTEM DYNAMICS TO OTHER CASES. WE HOPE TO RECORD AND CODE THERAPY SESSIONS, OBTAINING TIME SERIES DATA, AND BUILD MODELS OF SPECIFIC FAMILY PROBLEMS. A SET OF GENERIC STRUCTURES MAY EMERGE FROM THE COMMUNALITY OF FAMILY PROCESSES, JUST AS, FOR EXAMPLE, THE GENERIC STRUCTURES OF INVENTORY PROBLEMS EMERGED FROM MODELING MANUFACTURING PROCESSES IN ORGANIZATIONS.