# FROZEN WITH FRIGHT? CASE CONFERENCE: THE MENTAL EXPERIENCE OF CATATONIA



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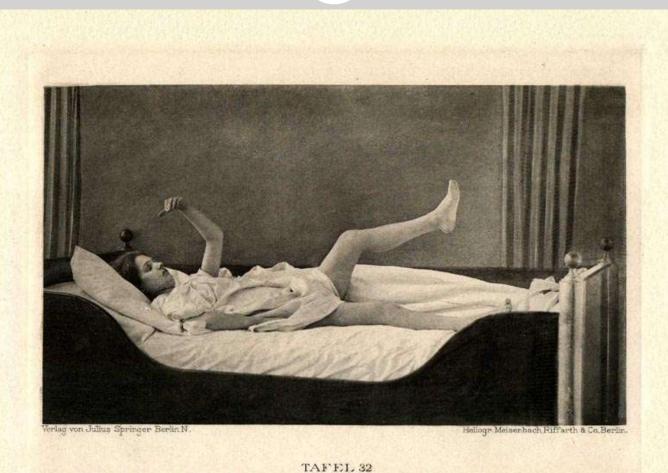
#### **OVERVIEW**

- 1. Rationale for this presentation
- 2. Refresher on catatonia by Dr. Francis
  - a) Historical depiction of catatonia in the 1930s: Video
- 3. Inpatient case presentation
  - a) Post-catatonic state patient interview: Audio Recording
- 4. Historical references to the mental experience in catatonia including relevant research studies
- Conclusions/relevance of findings for future patient care

#### **RATIONALE**

- My experience: Three inpatients with striking findings >> prolonged mutism, withdrawal & negativism
- Catatonic patients present unique challenges in terms of clinical assessment.
- Draw an emphasis on the humane treatment of patients with catatonia.
- Catatonia has been described for over a century yet a lot still remains unknown about the mental state.
- Incidence: Relevance for all psychiatrists.

## REFRESHER ON CATATONIA



#### WHAT IS CATATONIA?



Karl Ludwig Kahlbaum (1828—1899)

The clinical syndrome of "Katatonie" was formulated and named by Kahlbaum.

"... the patient remains entirely motionless, without speaking and with a rigid, masklike facies, the eyes focused at a distance; he seems devoid of any will to move or react to any stimuli; there may be a fully developed "waxen" flexibility, as in cataleptic states, or only indications of this striking phenomenon.

...the general impression conveyed by such patients is one of profound mental anguish or immobility induced by severe mental shock ...

Once the clinical signs are manifest, they tend to persist, although in some patients they appear for relatively short periods and then tend to recur.

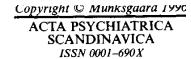
The obvious association of this illness with other signs of disease, and its constant occurrence with certain somatic (particularly muscular) disorders, have been more or less ignored."

"Die Katatonie, oder das Spannungsirresein" 1874

#### RESEARCH IN CATATONIA AT SUNYSB

- Prevalence and phenomenology
- Development of standard examination and rating scale
- Treatment response
- Subtypes: excited-retarded, acute-chronic, primary-secondary,
   benign-malignant
- Discrimination from other motor syndromes
- NMS as Toxic Catatonia
- Delirium with Catatonic Features

## 1<sup>ST</sup> RATING SCALE AND QUANTITATIVE RESPONSE TO TX



## Catatonia. I. Rating scale and standardized examination

Acta Psychiatr Scand 1996: 93: 137–143 Printed in UK – all rights reserved Copyright © Munksgaard 1996
ACTA PSYCHIATRICA
SCANDINAVICA
ISSN 0001-690X

## Catatonia. II. Treatment with lorazepam and electroconvulsive therapy

Bush G, Fink M, Petrides G, Dowling F, Francis A. Catatonia. II. Treatment with lorazepam and electroconvulsive therapy. Acta Psychiatr Scand 1996: 93: 137–143. © Munksgaard 1996.

G. Bush, M. Fink, G. Petrides, F. Dowling, A. Francis

Department of Psychiatry and Behavioral Sciences

#### BUSH FRANCIS CATATONIA RATING SCALE (23 ITEMS)



Full Scale Items (9)

Excitement\*\* Immobility/Stupor\*\* Mutism\*\* **Staring** Posturing/Catalepsy\*\* **Grimacing\*\*** Echopraxia/Echolalia\*\* Stereotypy\*\* Mannerisms\*\* Verbigeration Rigidity\*\* Negativism\*\* Waxy Flexibility\*\* Withdrawal

Impulsivity
Automatic Obedience
Mitgehen
Gegenhalten
Ambitendency
Grasp Reflex
Perseveration
Combativeness
Autonomic Abnormality

\*\* DSM-IV Catatonic Signs

#### ITEMS FROM BUSH-FRANCIS CATATONIA RATING SCALE [BFCRS]

#### 3. Mutism:

Verbally unresponsive or minimally responsive.

0= Absent

- 1= Verbally unresponsive to majority of questions; incomprehensible whisper.
- 2= Speaks less than 20 words/5 minutes.
- 3= No speech

#### 12. Negativism:

Apparently motiveless resistance to instructions or attempts to move/examine patient. Contrary behavior, does exact opposite of instruction.

- 0= Absent
- 1= Mild resistance and/or occasionally contrary.
- 2= Moderate resistance and/or frequently contrary.
- 3= Severe resistance and/or continually contrary.

#### 14. Withdrawal:

Refusal to eat, drink and/or make eye contact.

- 0= Absent.
- 1= Minimal PO intake/ interaction for less than one day.
- 2= Minimal PO intake/ interaction for more than one day.
- 3= No PO intake/interaction for one day or more.

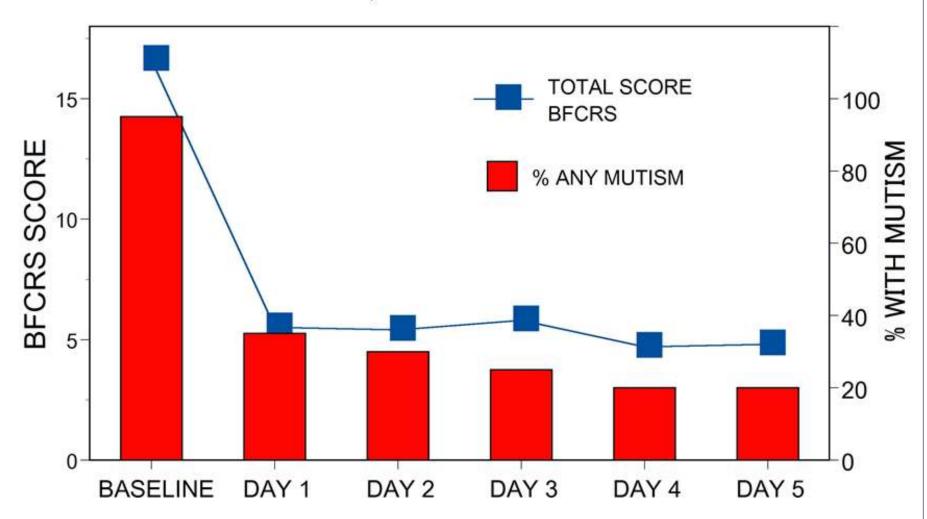
#### INCIDENCE OF CATATONIA

TABLE 1. Prospective Studies of the Incidence of Catatonia

Authors	Year	Patients Screened	Percent With Catatonia Syndrome	Percent With Mutism	Percent With Negativism or Withdrawal
Rosebush et al <sup>1</sup>	1990	140	9	85	78
Ungvari et al <sup>2</sup>	1994	212	8	94	67
Bush et al <sup>3,4</sup>	1996	215	7	86	75
Peralta et al <sup>5</sup>	1997	567	3.5	55	60
Northoff et al6	1999	1259	2.7		_
Bräunig et al <sup>7</sup>	2000	297	12	54	58
Lee et al <sup>8</sup>	2000	160	15	54	71
Peralta and Cuesta9	2001	187	17	84	69
Chalasani et al <sup>10</sup>	2005	208	12	63	50
Peralta et al <sup>11</sup>	2010	200	12	38	54
Mean (SEM)			9.8 (1.4)	68 (6)	62 (3)

Francis et al. 2010

## CHANGE IN BASELINE BFCRS SCORE N=20, BASELINE=16.6



#### VIDEO OF CATATONIA

- Historical, 1930's, National Library of Medicine
- SEVERE case of catatonia, no clinical details
- Tube-feedings for 6 months with good nursing care
- Sodium amobarbital [Amytal] treatment with temporary relief
- Catatonic signs: Mutism, Rigidity, Posturing/Catalepsy,
   Withdrawal, Negativism, ?Staring

## HISTORICAL VIDEO





Stony Brook University Medical Center 10N

#### CHIEF COMPLAINT

 The patient is a 24 year old single, unemployed, Asian male who resides with his parents, with a past psychiatry history of depression who was brought in by family after patient expressed suicidal ideation.

## HISTORY OF PRESENT ILLNESS

- Patient had been increasingly mute for about 1-2 weeks prior to arrival and was observed by the family to be isolative, withdrawn, staring at a blank computer screen and making no spontaneous movements.
- He had not eaten for over 24 hours which prompted his parents to call a family friend who was a physician to come evaluate the patient.
- During this evaluation, the patient was asked if he was "depressed" and thinking of suicide to which the patient nodded, "yes." He was subsequently brought to the SBUMC CPEP for evaluation and eventually admitted to the inpatient psychiatric unit 10N.

## SOCIAL & DEVELOPMENTAL HISTORY

- The patient was born and raised in New York until he moved to Florida with his family about 11 years ago. His parents are of Asian descent who emigrated to the US in the 1980s. The patient is the 3<sup>rd</sup> of 4 children who are all highly educated and either in or pursuing professional careers.
- In Florida, the patient did extremely well in high school and was the Valedictorian of his graduating class of about 1000 students and he was awarded a scholarship to an out-of-state university.
- During his time in college, the family communicated with the patient rarely and he only visited New York on a few occasions. He did well in school for his first year and then stopped returning home for vacations.
- He ultimately did not graduate and could not continue due to financial hardship and returned back to New York about 18 months prior to hospital visit.

## SOCIAL & DEVELOPMENTAL HISTORY

- Since returning to New York, patient is described as being a quiet individual who has few friends but has not been engaged in many social activities. He isolates himself to his room and makes minimal contact with his family. He spends the majority of his time watching television or playing video games, leaving his room only for meals.
- He has carried on this way up until the worsening of his condition 1-2 weeks prior to hospital visit.

- No prior inpatient psychiatric hospitalizations.
- The patient sought the help of a therapist during his second undergraduate year for poor academic performance.
- At that time he stated that he had noticed a decline in his mood with no clear trigger or stressor that was occurring during this time period. He only noted that it was a change from how he felt in high school – which he noted was "mostly happy."
- He stated that therapy was only somewhat helpful, and he was subsequently referred to a psychiatrist by his therapist during his 5<sup>th</sup> undergraduate year for a medication consultation for symptoms of "anxiety and depression."

- At that time his symptomology was significant for anhedonia, general apathy for life with no real direction for the future, decreased concentration and motivation, and poor sleep characterized by difficulty falling asleep and waking up with pervasive fatigue and lack of energy.
- He admitted to having fleeting thoughts of suicide that "come and go for no particular reason," but denied any clear intent or plan to harm himself.

- According to the notes, he stated that he chose to isolate himself from others and didn't have much of a social network.
- When asked specifically, he denied having any close friends or confidants he could trust.
- He described his physical self as "tense" most of the time, especially when he is in public.

#### Multiaxial Diagnosis in 2010

- Axis I: Major Depressive Disorder, single episode, severe without psychotic symptoms, Social Phobia, rule out Pervasive Developmental Disorder NOS
- Axis II: rule out Schizoid Personality Disorder
- Axis III: ruptured appendix Jan 2010
- Axis IV: separation from family, socially isolated, academic progression difficulties
- Axis V: GAF 50

#### **Treatment**

 Started on Citalopram 10mg po daily which he continued for about 2 months and reported some improvement in depressive symptoms.
 He stopped the medication on his own and failed to follow-up.

## HISTORY CONTINUED

#### **PAST MEDICAL HISTORY:**

Ruptured appendix Jan 2010, no allergies or medications.

#### **SUBSTANCE USE HISTORY:**

No history of smoking, alcohol or illicit substance use.

#### **FAMILY HISTORY:**

No history of psychiatric illnesses or substance use.

#### **CPEP Presentation**

- In CPEP the patient was diagnosed with Catatonia.
- Bush Francis Catatonia Scale was applied with a positive score in 5 domains:
  - 1. Immobility/Stupor
  - 2. Mutism
  - 3. Staring
  - 4. Withdrawal
  - 5. Ambitendency
- Received treatment with Ativan 3mg total and was subsequently admitted to 10N under DOCS.

#### MENTAL STATUS EXAM UPON 10N ADMISSION

Appearance/behavior: Bearded young man in hospital gown, cooperative, but answers only by very minimal nodding of head, though he clearly listens to the questions and nods at appropriate times and with different answers to different questions that suggests he is comprehending; eye contact is poor, with downcast gaze throughout the lengthy interview. No posturing, grimacing, abnormal movements or hallucinatory behaviors noted. His psychomotor activity level is reduced. He ambulates with staff but otherwise sits/lies almost motionless.

#### MENTAL STATUS EXAM ON ADMISSION

**Speech:** The patient does not communicate verbally.

<u>Mood</u>: Nods "yes" when asked if he is depressed. Also, nods "yes" when asked if he has thoughts of suicide and when asked if he has a plan. When given a series of choices about when suicidal ideas began, he nods to indicate that they started in college.

Thought Content: Nods "no" to questions about auditory hallucinations or visual hallucinations, persecutory or grandiose delusions or homicidal ideas.

<u>Cognitive Function</u>: Alert but unable to assess further. <u>Insight/Judgment</u>: Seemed impaired based on history.

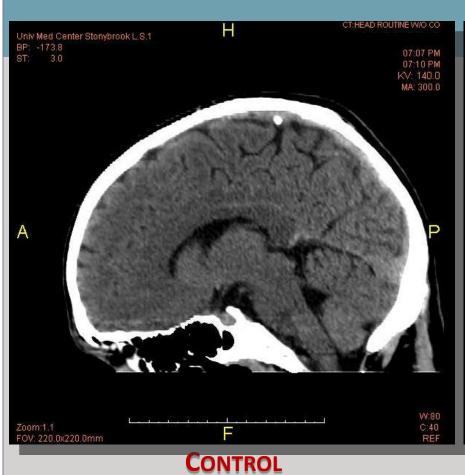
#### **LABORATORY FINDINGS**

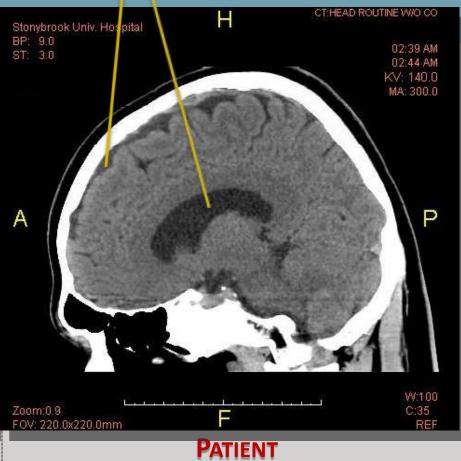
- Routine laboratory tests were done which were all Within Normal Limits:
  - Complete Blood Count
  - Chemistry Panel
  - ▼ Liver Function Tests
  - ▼ Thyroid Hormone (TSH)
  - ■ Syphilis Blood Test (RPR)
- Urine Toxicology Screen was NEGATIVE.

#### CT HEAD FINDINGS: SAGITTAL

Volume Loss

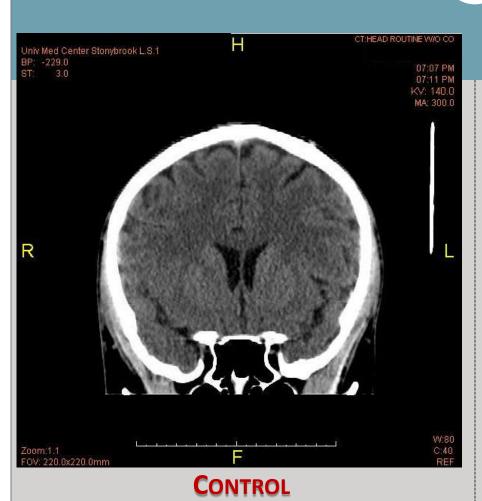
Enlarged Right Ventricle

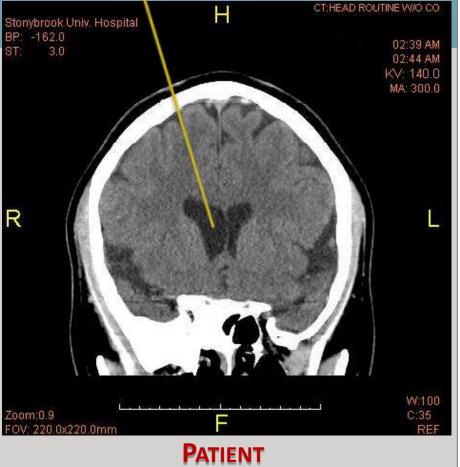




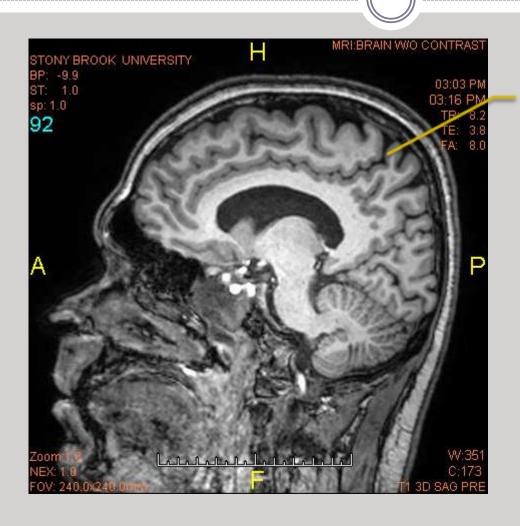
#### CT HEAD FINDINGS: CORONAL

#### Enlarged Right Ventricle





#### MRI Brain without contrast: Sagittal View



Mild diffuse prominence of the sulci

Day #1: CPEP

Mutism, immobility, staring, withdrawal, ambitendency



#### Day #2: Inpatient Ward

Mutism and some withdrawal continues, nods head yes/no to questions, feeling "confused", other catatonic signs resolved.



#### Day #3

Spoke several words to staff & family after lorazepam dose increase. He didn't speak again for two weeks after this. Laying in bed, needs encouragement to go to activities.

Day #4

OOB most of the day, watching TV, attending meals and groups. Mutism persists.



#### Day #5

More spontaneous when nodding yes/no. First written communication. Mutism persists.

? AH→ Risperidone 0.5mg/day started



#### Day #6

Nods yes when asked if he believes "something bad" might happen if he talks. Remains active on unit. Mutism persists.

## Day #7

Nodded "yes" when asked if he hears someone telling him not to talk.



## Day #8-21

Essentially unchanged > Remains mute, eating, ambulating on the unit. Attending all groups. Less withdrawn.

## Day #22

**First significant verbal communication.** Spontaneity of speech was limited with short responses. Reports "nervousness." Excessive worry. Felt like "everyone was against me."



## Day #26

Subjective improvement in anxiety since admission. Feelings of distrust of others persists.

Denies AVH.

## Day #30

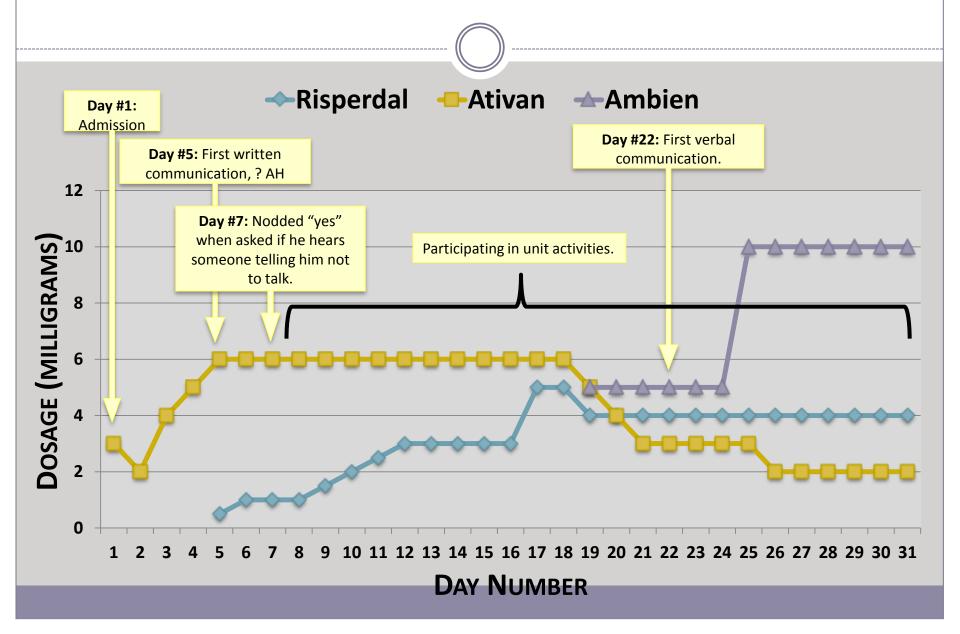
Mood is brighter. More spontaneous, talking with roommate. Anxiety is "pretty much gone." Family feels he is "better than baseline." Denies SI. Day pass went well.



Day #31

Discharge

## MEDICATION TITRATION OVER TIME



# Interview: Day 31 of Hospitalization



### Patient's Subjective Experience of the Catatonic State

Q: Looking back to when you first came in compared to now, what's different?

A: I'm calmer and worried less.

Q: Can you describe what that time was like for you?

A: I would have the thought that people were judging me.

Q: Was it because of your anxiety and the way you were feeling that people were judging you that made you feel that way [suicidal]?

A: Mostly, yes.

Q: Did you feel like you were stuck, and you couldn't get the words out?

A: At times.

Q: Was that a scary feeling for you?

A: Yes.

Q: Did you also feel stuck in your movements, like if you would want to move, you couldn't move?

A: No.

# LITERATURE REVIEW

1874

• Karl Ludwig Kahlbaum: "Die Katatonie, oder das Spannungsirresein" (Catatonia or Tension Insanity)

1921

August Hoch: "Benign Stupors"

1990

 Patricia I. Rosebush et al: Catatonia → Response to Ativan

1996

• Northoff et al: Subjective Experience in Catatonia

#### KARL LUDWIG KAHLBAUM: 1874

- Monograph, ~20 Case Histories
- Hospital in Germany, no effective treatment
- 84% Mutism, 79% Withdrawal, 53% Negativism
- "I have observed especially in catatonia a striking persistent negativism, or absence of a subjective recollection of the disease" p. 98

Case 1: " ... I feel as if I am forbidden to do things"

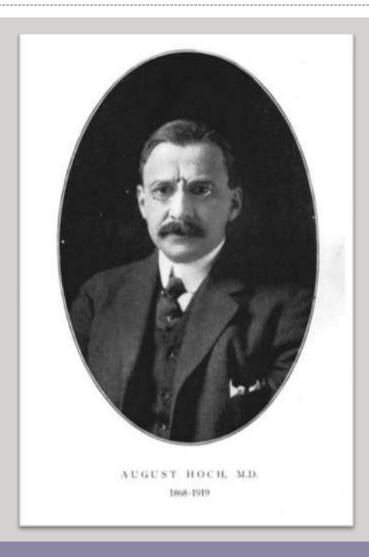
Case 9: "the Devil will soon tear me to pieces"

Case 16: "I have done something wrong but not sure what"

Case 17: "Only while the machine works inside me is it

impossible to speak"

# AUGUST HOCH: 1921



- Monograph, "Benign stupors"
- 25 cases, NYS Psychiatric Institute-Columbia
- Case 1: She suddenly thought she was dying and that her father's picture was talking to her, "then I lost my speech." She claimed not to have any recollection of what went on during a considerable part of the stupor.

# AUGUST HOCH: 1921

- Case 4: She did not "feel like talking" the limbs "felt stiff-like"
- Case 5: She remembered that she did not talk. She had a feeling she was going to die and said "I thought I would die if I kept still"
- Case 8: She did not speak because she did not know if it were right or wrong, felt she might cause disturbance if she answered.

### AUGUST HOCH: 1921

- "In a survey of 36 consecutive cases of definite stupor, literal death ideas were found in all but one case. They seemed to be commonest during the period immediately preceding the stupor ..." p. 104
- "From this we may suspect that in many cases there may be a thought content, although the patient's mind may seem to be a complete blank." p. 104
- "It is important to note that when a retrospective account is gained, the delusions are practically always of death or something akin to it, such as being in prison, feeling paralyzed or stiff, and so on." p. 105

### PATRICIA I. ROSEBUSH ET AL: 1990

- N=15, hospital admissions, prospective treatment with lorazepam
- 85% Mutism, 78% Withdrawal, 50% Negativism
- "Patients who responded to lorazepam [13/15] later described intense anxiety and fear usually related to psychotic ideation during the catatonic period. One of the 2 who did not respond stated she had no anxiety, while the other had no memory of the catatonic episode." p. 361

# NORTHOFF ET AL: 1996

- University Clinic in Magdeburg, Germany
- Only systematic paper on subjective experience
- Assessed 3 wks after recovery
- N=24, mean age 33.4
- Diagnoses: 13 Schizophrenia, 7 Affective d/o, 4 Other
- 80% Mutism, 61% Withdrawal, 42% Negativism on presentation
- Devised 14 item self-rating scale
- Categories: emotional, cognitive-will, internal and environmental affective experience
- Likert-type forced-choice vs. "middle"

#### Domains of Subjective Experience (% endorsing statement) Northoff et al., 1996 N=24, 3 wks after recovery

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Motor Function 50 I had no problems in executing movements 25 I had full control of my movements	42 I was unable to execute movements 54 I lost control of my movements	
Will 25 My will was free and not blocked 20 I could follow the coherent stream of thoughts	42 My will was blocked entirely 66 I was unable to follow the coherent stream of thoughts	
Cognitive 20 I had no problems in speaking 38 My head was full of ideas	63 I was unable to speak 38 My head was totally empty	
Emotional 13 I had intense feelings of happiness 13 These feelings did not touch me 13 I had full control of my feelings	54 I had intense feelings of anxiety 53 The intense feelings overwhelmed me 46 I lost control of my feelings	
Affective experience of motor alterations 25 My movements were not influenced by the intense emotions 25 My speech was not influenced by the intense emotions	50 The intense emotions made me unable to move 50 The intense emotions made me unable to speak	
Experience of the Environment 20 I did not feel isolated from the environment 25 I did not feel overwhelmed by the environment 9 The state was nice	50 I felt isolated from the environment 63 I felt overwhelmed by the environment 80 The state was horrible	

### NORTHOFF ET AL: 1996

- Most patients with catatonia recalled distress over emotional feelings and detachment from the environment
- Most associated unpleasant emotions with inability to move and speak
- Most did not note decreased 'will' as basis for not moving or speaking
- +/- endorsement of loss in control/execution of movements
- 80%: "the experience was horrible" [Schrecklich]

# Domains of Subjective Experience (% endorsing statement) Northoff et al., 1996 N=24, 3 wks after recovery, ■=Pt

Motor Function	4, o who after recovery, = 1 t
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The Court of the C	34 Trost control of my movements
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25 I did not feel overwhelmed by the environment	63 I felt overwhelmed by the environment
9 The state was nice	80 ■ The state was horrible

# Comparison of Subjective Experience in Catatonia, Parkinsonism, Depression: Northoff et al: 1998

- Follow-up study with same 14-item scale
- N=22 for each catatonia, MDD, Parkinson's
- Catatonia: 90% Mutism, 54% Negativism, 86%
   Withdrawal
- Self-report of experience 21 days after recovery
- Predictors of initial lorazepam response in 24 hrs [2-4 mg] for catatonia

# Comparison of Subjective Experience in Catatonia, Parkinsonism, Depression: Northoff et al: 1998

- Catatonia: Less recall of motor deficits, more emotional distress
- Parkinson's: Much more aware of motor deficits, less emotional distress
- Treatment: 13/22 responders by 24 hrs, 9/22 nonresponders
- Responders to lorazepam: more emotional distress, more anxiety, more detachment from environment

#### **CONCLUSION**

- Our patient had a mental experience that's similar to what's been shown historically. His mental experience was laden with anxiety and fears.
- Having a better understanding of the mental experience of catatonia allows us to optimize our interactions with the patient, especially for those patients who don't respond promptly to the treatment.
- ❖ → Sensitivity & Humanity towards the patient:
  - Reassurance of safety in the hospital
  - Reassurance of improvement with treatment despite feeling "stuck"
  - Familiar objects and people, ie. friends & family
  - Limit number of people who interact with the patient
  - Avoid premature pressure for the patient to speak or move
  - Attempt non-verbal forms of communication, ie. writing, hand gestures
  - Be mindful that most patients recall the experience

#### **Psychological Theory of Catatonia**

"Scared Stiff: Catatonia as an Evolutionary-Based Fear Response" Moskowitz (2004)

- This is a theoretical paper linking the anxiety/fear as "causative" for catatonia.
- Thesis: Catatonia is 'relic' of ancient defensive strategy in early humans [freezing to escape predator's attention]
- Support: Animal analogues exist; Anxiety/Fear common in catatonia;
   Rx's include BZDP and barbiturates that relieve anxiety
- Problems: Freezing transient, flight/fight ensues if predator closes in,
   Catatonia may be chronic & fatal; Catatonia Rx dose>>Anxiolytic dose;
   ECT best Catatonia Tx but not useful for anxiety; Fallacy of assigning one item of syndrome as cause of entire syndrome

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- Having a better understanding of the mental experience of catatonia allows us to optimize our interactions with the patient, especially for those patients who don't respond promptly to the treatment.
- ❖ → Sensitivity & Humanity towards the patient:
  - Reassurance of safety in the hospital.
  - Reassurance of improvement with treatment despite feeling "stuck."
  - Provide an environment with familiar objects and people, ie. friends & family.
  - Limit number of people who interact with the patient.
  - Resist prematurely pressuring the patient to speak or move.
  - Attempt non-verbal forms of communication, ie. writing, hand gestures
  - Be mindful that most patients recall the experience.

# British Physician Henry Monro in 1850 Captures a Catatonic Patient's Travail.

"In a large collection of insane patients we cannot help marking a few who stand in apparently profound sopor [stupor]; their eyes are glued down or else staring open in a fixed manner, so immovable that you do not observe the least twinkle of the eyelid; the skin is cold and clammy; you speak to them, they will not answer; you offer them food, they will not eat. They indeed are most unwilling to move from the spot which they have taken up. You would say of them at first sight that they are in a perfectly apathetic and probably unconscious state until you try to cross their will, and then you often find a most resolute resistance. The state of the intellect in these cases is often hard to arrive at; for the mind is a prisoner; all the ordinary avenues of expression by which the caged spirit may take flight are sealed up by an influence of a numbing character, which in many points of view seems to resemble simple drowsiness. Sometimes when you lay hold suddenly of such a patient, you may shake him out of the stupor, and you find that his mind is by no means lost; that he has a clear perception of all that has been going on even during the trance; and he will argue about it as about an incubus which he could fully appreciate but could not control."