Objective Grading of Four-Mallet Marimba Literature The Performance Level System

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Research Background

Percussion Pedagogy

DMA Document - Percussion Techniques Class

- Sent questionnaire to 2000 current band directors asking if the percussion techniques class they took in college was helpful for their teaching
- Resulted in a 30-day lecture outline which included information suggested by on-the-job band directors

MSHSAA Prescribed Music List

- President of MOPAS charged chapter with compiling complete database of pieces on the PGML with recommendations for removal or retention on the list
- Finally, in summer of 2008, recommendations for removal were made; suggestions for additions begin this next summer
- complete database of information on every piece (approx. 500) is available on MOPAS chapter website

Current Research Project

Examine the four-mallet marimba repertoire and identify difficulty levels that expand the current grading system (beginning, intermediate, advanced) with the purpose of creating a pedagogically helpful listing of literature

Why? – Two Personal Observations

1. Lack of Quality Pedagogical Information

Too often, beginning students (particularly at the high school level) do not follow an appropriate repertoire sequence to significantly advance the level of performance on the instrument

Repertoire is static - playing the same pieces 2008 MSHSAA district/state appearances – 20/90 (over 20% of marimba solos were the same piece)

2. Not enough quality literature at the beginning and intermediate difficulty levels (quality often emerges from quantity)

1. Lack of Quality Pedagogical Information



 Publisher/Distributor Online Catalogs
 Provide information appropriate to selling a piece of music - commercial bias skews information

 Reviews - official (PAS) and unofficial (personal websites)

Provide personal opinion regarding any number of aspects in a piece of music - subjective and unreliable (some very good and some very bad)

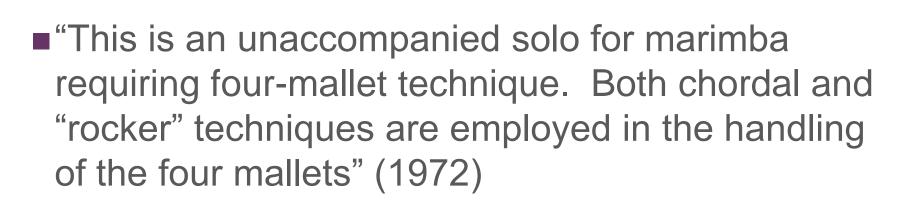
First Example Yellow After The Rain by Mitchell Peters

One of the most popular four-mallet marimba pieces of all time

YouTube videos - 37 performances Mexican Dances (38), Rosauro marimba concerto (51), and Rhythm Song (66)

2008 MSHSAA district/state appearances – 20/90 (over 20% of marimba solos were the same piece) +Online Information

Official Review PAS Review Library



From www.pas.org





Product Rating:5 starsDate Posted:2006-06-23 10:15:31Posted By: Nathan PiazzaComments:

Yellow After The Rain is basically THE Beginning Marimba Solo. A bit overplayed to the point of almost being cliche perhaps, but a good piece nonetheless. A great piece to start on for the beginner, or to study and use as practice for the more intermediate student, as it addresses a lot of technical issues.

Product Rating: 5 stars - Awesome Date Posted: 2006-12-16 00:52:42 Posted By: Austin Meade Comments:

This is an awesome solo for jr. high students (which i am). i will be playing this solo for our solo competition in february.

Personal Online Library

Composer: Mitchell Peters Publisher: Composer Media Type: Score Copyright Year: 1971 Length: 6 Minutes Primary Instrumentation: 4.0 Marimba Must Have Difficulty: 4.5 of 11 (based on level in school) (11 = Graduate

Number of Performers: 1 Suggested Performance Venue: Undergraduate Audition

student)

Brief Review

This piece is clearly the standard four-mallet marimba rite of passage for all students in university percussion courses.

Nearly every percussionist and their dog has studied this piece (or its close cousin, "Sea Refractions").

One could write volumes about how Yellow After The Rain has been played, should be played, its history, its impact -- and indeed many percussionists have.



- Yellow After the Rain is a composition for solo marimba, written by former LA Philharmonic principal percussionist Mitchell Peters. Peters reportedly wrote the work for his own private students, for whom he was unable to find musically interesting material that introduced four-mallet techniques. [citation needed] The work is modal and employs many basic skills, introduced in a sequential manner.
- After a metrically deceptive introduction, the main theme is stated in the right hand, with left hand accompaniment. This is immediately followed by a repeat of the melody with the left hand taking over the tune and the right hand assuming the accompanimental role. Throughout, the performer is able to maintain a consistent interval in the accompaniment (parallel P4). Chordal rolls form a transition to the work's exciting "B" section, which utilizes single independent strokes with each hand fixed in the interval of a perfect fifth. The consistency of these intervals allows the performer to concentrate on the wrist and hand motions involved in the strokes without worrying about changing the spatial relationship of the mallets. After a recap of the right hand melody, the theme is stated in four-voice homorhythmic style, again maintaining the perfect fourth relationship (spaced a major second apart). A brief coda ends the work.
- Virtually an entire generation of marimbists has been introduced to four-mallet techniques with this work, and it is likely that this legacy will continue, even as a wealth of excellent material joins it in the repertoire.

+ 2. Need for Intermediate Literature

Nancy Zeltsman – ZMF New Music www.newmusic.zmf.us/commissioningproject.cfm

"One of the biggest obstacles facing budding marimbists is the desperate lack of quality marimba literature of intermediate difficulty.

Gradually, we have accumulated some excellent marimba works but most of these are very difficult both musically and technically. Few pieces are available to prepare students for these challenges.

A student pianist might play works such as Clementi's Sonatinas, some of Chopin's *Préludes*, or Schumann's *Scenes from Childhood (Kinderszenen)*. Vladimir Horowitz performed music from the latter in concerts as an elder statesman.

By comparison, almost no comparable repertoire exists for marimba. Intermediate Masterworks for Marimba aims to provide wonderful music for students that will also speak to concert marimbists."

Need for Intermediate Literature

Julie Davila, 10 Four Mallet Marimba Solos for the Intermediate Marimbist (2006, Row-Loff)

"A considerable portion of my teaching career has been devoted to helping the intermediate student develop their "total percussion" skills. During that time, I have noted an apparent need for more marimba literature, specifically designed to meet the needs of the intermediate four-mallet student."

Dr. Michael Gould (quote from cover of above book)

"Julie Davila's *Impressions on Wood* has filled in a much-needed body of repertoire for intermediate percussionists looking for short recital pieces."

Hypothesis



There are fewer pieces written for intermediate players than there are for advanced, however there are more performers available to play intermediate pieces. The result is that more pieces are being written for the fewest number of performers.

Numbers Game Unhelpful Review of Literature

- Largest and most comprehensive literature lists are the PAS Literature Reviews found in the Compositions Research section on the PAS website and Steve Weiss Music (largest distributor of percussion sheet music)
- PAS = 1204 total keyboard percussion solos (from website)
 - Difficult to decipher if the piece is for four-mallet marimba (reviews are not standardized and not all reviewers list # of mallets)
 - Several progressive method/etude books contain all levels of difficulty but only listed in one category
 - Piece is only reviewed if composer/publisher sends it to PAS and the piece is selected to be reviewed (not comprehensive)
 - Elementary-Intermediate (1-3) = 579, Intermediate-Advanced (4-6) = 625
- SWM = 1000 total keyboard percussion solos (from website)
 - Impossible to decipher if the piece is for four-mallet marimba (grade nor review includes clarification of instrumentation and # of mallets)
 - Website does not have grading number assigned to every piece
 - Last printed catalog with grading numbers was 2001-2002 (out-of-date)
 107-Grades 1-3, 626-Grades 4-6, unaccompanied marimba solos

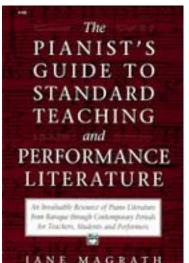
Proving Hypothesis Unsuccessful with simple steps

- Numbers game was mildly successful because comparisons were not equal – different grading systems, same pieces listed at two different difficulty levels
- Investigated smaller literature lists but they were created with different viewpoints defined by personal opinion. No system used defined parameters with which to objectively analyze fourmallet marimba literature.
- Realizing that there is no good resource of comprehensive information about four-mallet marimba literature - pedagogical, quantity and basic data



- Dr. Jane Magrath, Professor of Piano Pedagogy at OU
- Created pedagogical resource of thousands of piano works; each entry is annotated and assigned to one of ten different performance Levels
- No objective criteria; all her professional opinion





+Complete Research Steps

PILOT PROJECT

Analyze 50 pieces at the intermediate level

1. Each piece had to be listed as intermediate by one of three sources : Steve Weiss 2001-2002 catalog, PAS Reviews library, MSHSAA PGML

- 2. After above list was established, pieces were chosen randomly
- Establish objective, grading criteria by examining pieces
- List each piece in Level based on their criteria similarity

FULL PROJECT

- Complete same analysis on 50 beginning and 50 advanced pieces
- Define multiple Levels of difficulty in the four-mallet marimba repertoire based on criteria similarity (150 pieces=15% of the approximate body of repertoire)
- Assign each piece in the repertoire to a Level (approximately 1000 pieces)
- Disseminate Information (book form, online companion)





- Create a list of technical and musical attributes found in the pieces (strokes, key, tempo, etc)
- Find similarities and create labels for evaluation criteria
- Create Excel spreadsheet with labels and analysis for each piece

+ Evaluation Criteria

- Stroke types by interval
 - stroke type definitions taken from Method of Movement by L.H. Stevens and Permutations for the Advanced Marimbist by Kevin Bobo

Double Vertical, Single Independent, Single Alternating, Double Lateral, Triple Stroke

- Roll types
 - Hand-to-Hand, Independent, Mandolin, Ripple
- Wing span
 - Distance between both hands at largest separation
- Tempo
- Key Signature*
- Time Signature *
- Instrument Required * *did not add much difficulty but good information

Definitions of Certain Criteria

- Definition of Single Alternating stroke
 90-200 bpm (eighth notes)
- Definition of Double Lateral/Triple stroke: minimum 96-140 bpm (sixteenth notes)
- Analysis excludes optional parts (adding extra octaves)
- Stickings most were very obvious however, in one or two situations, stickings were asked of the composer; if no response, author selected sticking

Initial Results and Problems

8 different Levels were created for 30 pieces previously listed as intermediate

HOWEVER;

- Problem #1 stroke types were only being categorized by interval, not speed
- Problem #2 tempo was irrelevant; slow tempos often have fast stroke types and vice versa
- Problem #3 very difficult to find a method of quantifying wingspan
- Problem #4 single independent strokes were irrelevant

⁺ 2nd Try at Analysis

Changed Criteria to include:

Stroke Types according to Tempo

- DV, SI, and SA as 8ths;
- SA, DL, TS as 16ths (had to re-calculate all tempos and time signatures to quarter equivalents)
- Translated all rolls into stroke-type
 - Hand-to-Hand Roll = DV strokes 120-140)
 - Single-Independent Roll = SA after 8^{ths}=150
 - Ripple Roll = DL at $16^{\text{ths}} = 100$

Left wingspan and key out of equation

⁺ 2nd set of Results and Problems

6 Levels Created out of 50 pieces

Problem #1

Key was relevant but not in the traditional sense

- 1. A piece in CM and a completely atonal piece were categorized the same if they had the same stroketype
- 2. Key analysis needed to define movement of the hands between manuals

Problem #2

The order of difficulty for the criteria was essential is creating different levels. This had to be subjective by using professional opinion.

* 3rd Try = "the Charm"

Criteria Included:

- Stroke-type/tempo/wrist rotation (none, some, lots)
 helped analyze movement of hands without regard to key signature
- More delineation given to repetitive strokes versus moving strokes
 - DV's are easy when repeating the same note harder when moving between the manuals
- Began to Include 50 Elementary pieces and 50 Advanced pieces



TECHNIQUES

Wingspan up to 2.5 octaves DV 2nd-6th; Up to 110, same manual or same notes, small movement SI Up to 120, one hand

LITERATURE - 11 TOTAL

- E1 Mazurka from Funny Mallets, Bk 1 (Zivkovic)
- E7 Five Pieces for Anais no. 3 (Wiener)
- E12 #1, 4-Mallet Marimba Solos (Cirone)
- E24 Tanz, Anthology of Lute & Guitar Music (Fuhrmann/arr. Kite)
- E48 Sonatine Op. 71, 4-Mallet Method for Mar. (Giuliani/arr. Moyer)
- E13 #4, 4-Mallet Marimba Solos (Cirone)
- E27 Minuet in C, Anthology of Lute & Guitar Music (arr. Kite)
- E49 A Pleasant Morning, 4-Mallet Method (Streabbog/arr. Moyer)
- E8 Five Pieces for Anais, no. 5 (Wiener)
- E25 Branle de Bourgogne, Anthology (Roy/arr. Kite)
- E26 Study in G, Anthology (Aguado/arr. Kite)



TECHNIQUES

DV 2nd-6th; Up to 110, both manuals, more movement DV 2nd-6th; 111-140/Chorale, none-some wrist rotations DV 7th-8th; Up to 110, same manual or same notes, small movement SI 121-150, 3 strokes or less, 4+ same hand/note (roll)

LITERATURE - 10 TOTAL

- E14 #9, 4-Mallet Marimba Solos (Cirone)
- E41 Comptine, Marimb'un (Bonin)
- I2 Canzona IV (Immerso)
- E32 Loch Lomond, Progressive Solos (arr. Houllif/Moore)
- E22 Theme and Variation, #5 (Peters)
- E38 Colors (Ukena)
- E43 Jumping, Marimb'un (Bonin)
- E44 Ballad, 4-Mallet Method (Moyer)
- E31 Shortnin' Bread, Progressive Solos (arr. Houllif/Moore)
- I38Zen Wanderer (Peters)



Technique

DV 2nd-6th; Up to 110, lots of wrist rotations/movement DV 7th-8th; Up to 110, both manuals, more movement DV 7th-8th; 111-140/Chorale, none-some wrist rotations SI 121-150 4+ strokes, one hand SA 3rd-6th; 90 to 150, none-some wrist rotations, one beat, same notes DL 3rd-6th; 96-120 (16ths), no wrist rotation/little movement



LITERATURE - 15 TOTAL

- E33 Pavana, Progressive Solos for 3 or 4 Mallets (Milan/arr. Houllif/Moore)
- E34 Estudio, Progressive Solos for 3 or 4 Mallets (Sor/arr. Houllif/Moore)
- E35 Sarabande from Sonata II, Progressive Solos (Bach/arr. Houllif/Moore)
- E45 Mit Fried und Freud ich farh dahin, 4-Mallet Method for Marimba (arr. Moyer)
- E36 Chorale without time (Gottry)
- I37 A Little Prayer, Three Chorales (Glennie)
- I36 Giles, Three Chorales (Glennie)
- I32 Soliloquy, Mexican Murals (Brown)
- I1 Panis Anglicus (Franck/arr. Gaetano)
- E4 Distant Light (Fambrough)
- I7 Mvt. I, Two Movements for Marimba (Gaetano)
- I40 Mvt II, R.D.H. (Gipson)
- E10 Pavanne from Parthenia, The Marimba Goes Baroque (Byrd/arr. Pimental)
- I6 Ghost River (Crawford)
- E50 Theme and Variations, 4-Mallet Method for Marimba (Berkovich/arr. Moyer)



TECHNIQUES

Wingspan 2.5-3.0 octaves DV 2nd-6th; 111-140/Chorale, lots of wrist rotations/movement DV 2nd-6th; 141-160, no wrist rotations DV 2nd-6th; 161-180, 3 strokes or less SI 151-180; 3 strokes or less SA 3rd-6th; 75-100 (16ths), one beat SA 3rd-6th; 90 to 150, none-some wrist rotations, constant one Hand SA 7th-8th; 90 -150, none-some wrist rotations, one beat DL 3rd-6th; 96-120 (16ths), some wrist rotation/movement TS 3rd-6th; 96 to 120 (16ths); same manual



+ Level 4 LITERATURE - 20 TOTAL

44	Carousel, Four Dances (Elster)
143	Light in Darkness, Three Chorales (Glennie)
l10	The True Lover's Farewell (arr. Gwin)
134	Mvt. 3, Suite for Marimba (Ameele)
E47	Lobe den Herren, den Machtigen Konig der Ehren, 4-Mallet Method
	for Marimba (Bach/arr. Moyer)
18	Dance of the Witches (Kopetzki)
E42	Mister C., Marimb'un (Bonin)
133	Dance, Mexican Murals (Brown)
E2	Der Wanderer, Funny Mallets Bk. 1 (Zivkovic)
169	Sea Refractions (Peters)
E30	German Dance, Progressive Solos (Haydn/arr. Houllif/Moore)
E15	#20, 4-Mallet Marimba Solos (Cirone)
113	Elegy for Alpha (Riley)
14	Dog Beach (Peters)
112	Corcoran's Self Dedication (Johnson)
114	Lauren's Lullaby (Ukena)
124	Jesu, Joy of Man's Desiring (Bach/arr. Marchetti)
E11	Gigue from First Partita, The Marimba Goes Baroque (Bach/arr. Pimentel)
117	Mvt. II, Two Movements for Marimba (Gaetano)
E6	Five Pieces for Anais, No. 1 (Wiener)



DV 2nd-6th; 141-160, some wrist rotations

DV 2nd-6th; 181+, 3 strokes or less

DV 7th-8th; Up to 110, lots of wrist rotations

- DV 7th-8th; 161-180, 3 strokes or less
- SI 121-150 4+ strokes, unison melody/rhythm, interlocking melody

SI 181+; 3 strokes or less

SA 3rd-6th; 90 to 150, none-some wrist rotations, interlocking hands

SA 3rd-6th; 75-100 (16ths), constant

SA 7th-8th; 90 -150, none-some wrist rotations, constant

SA Unison-2nd; 72 to 150

DL 2nd; 96-120 (16ths), split manuals

DL 3rd-6th; 121-140 (16ths), no wrist turns

DL 7th-8th; 96 to 120 (16ths), no wrist rotations



LITERATURE - 16 TOTAL

- I41 Estudio 20, Anthology of Lute & Guitar Music (Sor/arr. Kite)
- I18 Ghanaia (Schmitt)
- I15 Reverie (Stout)
- E52 Hymn for An Angelic Child (Burghdorf)
- E20 III, 4-Mallet Marimba Solos (Cirone)
- I3 Echoes (Bobo)
- A43 Rhythm Song (Smadbeck)
- I39 Change My Medication (Combs)
- I5 Yellow After the Rain (Peters)
- I9 Transference (Riley)
- E46 A Quiet Moment, Four Mallet Marimba Method (arr. Moyer)
- E16 #25, 4-Mallet Marimba Solos (Cirone)
- E3 Ballade fur Petra (Zivkovic)
- I35 Perpetual Motion, Four Pieces (Elster)
- I46 A Little Jazz (Skoog)
- I16 Fantasy for Marimba (Brown)





TECHNIQUES

Wingspan 3.0-3.5 octaves

DV 7th-8th; 111-140/Chorale, lots of wrist rotations/movement

DV 7th-8th; 141-160, none-some wrist rotation

DV LH 8+; Up to 110

SI 151-180; 4+ strokes, interlocking melody

Ind Roll 3rd-6th; same manual

SA 3rd-6th; 101-120 (16ths), none-some wrist rotations

SA 7th-8th; 75-100 (16ths), same manual/little movement

DL 3rd-6th; 96-120 (16ths), lots of wrist rotations

DL 3rd-6th; 121-140 (16ths), some wrist turns

DL 7th-8th; 96 to 120 (16ths), some wrist rotations

DL 7th-8th; 121-140, (16ths), no wrist turns





LITERATURE - 13 TOTAL

- I25 Una Limosnita por amor de Dios Mangore (ad. Daughtrey)
- E18 #35, 4-Mallet Marimba Solos (Cirone)
- E17 #31, 4-Mallet Marimba Solos (Cirone)
- I20 Les Violons Morts (Zivkovic)
- A80 Mvt. 1, October Night (Burritt)
- I51 Prelude #1 (Gaetano)
- E9 Allegro con Spirito, The Marimba Goes Baroque (Bach/arr. Pimentel)
- A47 Rotation IV (Sammut)
- I23 Mvt. 2, Three Short Stores (Calissi)
- I22 Sir Lancelot (Houllif)
- I19 Waltz (Bissell)
- A45 Rotation II (Sammut)
- A9 C:M (McKenney)



TECHNIQUES

- DV 2nd-6th; 161-180, 4+ strokes, none-some wrist rotation
- DV 7th-8th; 181+, 3 strokes or less
- DV LH 8+; 111-140/Chorale
- Ind Roll 3rd-6th; split manuals
- Ind Roll 7th-8th; same manual
- SA unison-2nd; 75-100 (16ths)
- SA 3rd-6th; 121-140 (16ths)
- SA 7th-8th; 101-120 (16ths), same manual
- DL Unison-2nd; 96-120 (16ths), same manual
- DL 3rd-6th; 121-140, lots of wrist turns
- DL 7th-8th; 121-140, (16ths), some wrist turns
- DL 3rd-6th; 141-160 (16ths), no wrist turns
- TS unison-2nd; 96 to 120 (16ths)
- TS 3rd-6th; 96 to 120 (16ths); changing notes, different manual
- TS 3rd-6th; 121 to 140 (16ths); changing notes





LITERATURE - 12 TOTAL

- I42 In Troubadour Style, Four Pieces (Elster)
- E37 Period Piece (Krause)
- A6 Astral Dance (Stout)
- A57 Mvt 1, Two Movements for Marimba (Tanaka)
- E39 Dearest Lord Jesus (Bach/arr. Buszin)
- E40 Jesus, I Will Ponder Now (Bach/ed. Chenoweth)
- A81 Mvt. 2, October Night (Burritt)
- E19 I, 4-Mallet Marimba Solos (Cirone)
- I21 Prelude No. 11 (Helble)
- A12 Majestic, Caritas (Burritt)
- A46 Rotation III (Sammut)
- I11 Balaphuge (Bobo)





TECHNIQUE

DV 2nd-6th; 181-200, 4+ (same manual) DV 7th-8th; 161-180, 4+ strokes Ind Roll unison-2nd/trills SA 3rd-6th; 141-160 (16ths) SA 7th-8th;121-140 (16ths), same manual DL Unison-2nd; 121-140 (16ths), same manual DL 3rd-6th; 141-160 (16ths), some wrist turns TS unison-2nd; 121 to 140 (16ths) TS 3rd-6th; 141-160 (16ths); same notes



LITERATURE - 10 TOTAL

- I31 Village Festvial, Mexican Murals (Brown)
- A17 Golliwog's Cakewalk (Debussy/trans. Stevens)
- A11 Solem, Caritas (Burritt)
- A13 Dr. Gradus ad Parnassum (Debussy/trans. Stevens)
- I47 24 Caprices, Op. 1, No. 5 (Paganini/trans. Daughtrey)
- A14 Serenade for the Doll (Debussy/trans. Stevens)
- E29 Papillon Nr. 4 (Fink)
- I26 Mvt. 3, Three Short Stories (Calissi)
- E21 VI, 4-Mallet Marimba Solos (Cirone)
- A44 Rotation 1 (Sammut)



TECHNIQUE

Wingspan 3.5-4.0 octaves

DV 2nd-6th; 181-200, constant 8ths (split manuals)

DV 2nd-6th; 100-120 (16ths); 3 strokes or less

SI 181-200; 4+ strokes

SA unison-2nd; 101-120 (16ths)

SA 7th-8th; 141-160 (16ths), same manual

DL Unison-2nd; 141-160 (16ths), same manual

DL 3rd-6th; 161+ (16ths)

DL 7th-8th; 141-160, (16ths), no wrist turns

TS 3rd-6th; 160-180 (16ths); same notes





<u>LITERATURE - 6 TOTAL</u>

- A58 Movt II, Two Movements for Marimba (Tanaka)
- A50 Marimba Spiritual (Miki)
- I49 Marshmellow (Friedman)
- E28 Papillon Nr. 3 (Fink)
- I27 Prelude #12 (Helble)
- I45 Third Dance for Marimba (Hasenpflug)



TECHNIQUE

DV 2nd-6th; 120 (16ths) 4+ strokes DV 2nd-6th; 140+ (16ths) 3 strokes or less SA unison-2nd; 141-160 (16ths) DL 7th-8th; 161+ (16ths) TS unison-2nd; 160-180 (16ths); same notes





LITERATURE - 4 TOTAL

- I50 Prelude #1 (Gaetano)
- A10 Mystic, Caritas (Burritt)
- I29 Mvt. 1, Three Short Stories (Calissi)
- I30 French Flies (Bobo)



FINAL NUMBERS ANALYSIS

- LEVEL 1 11
- LEVEL 2 10
- LEVEL 3 15
- LEVEL 4 20
- LEVEL 5 16
- LEVEL 6 13
- LEVEL 7 12
- LEVEL 8 10
- LEVEL 9 8
- LEVEL 10 4

- TOTAL = 119
 - LEVELS 1-3 = 36
 - LEVELS 4-6 = 49
 - LEVELS 7-10 = 34
 - 30 PIECES TO GO!



New Description

- Title/Composer: Yellow After the Rain by Mitchell Peters
- Publisher: Mitchell Peters Publishing
- Date Published: 1965
- Price: \$7.00
 - This standard piece from the marimba repertoire contains:
 - Double-Vertical strokes at intervals between 2nd-6th; 8th note tempo = 121-150 with lots of wrist rotations
 - Single Independent strokes at tempo = 121-150 (travels between the manuals)
 - Single Alternating strokes at intervals 7th-8th; 16th notes at quarter note = 150, none-some wrist rotations
 - Instrument Required: 4 Octave
 - Duration: 3:00 minutes
 - Level 5





Complete repertoire (1000 pieces) annotations and database

Commission composers to write pieces for Levels that show need

Record series of CD's of pieces represented at each level



- Faculty Grant Writing Institute (Humanities Focus)
- College of Arts & Sciences Alumni Organization Grant
- Summer Research Fellowship
- Research Council
- Research Board

Personnel – Thank You

- Amy Hinkson, Graduate Student
- Darin Olson, Graduate Student
- Wes Stephens, Graduate Student
- Mary Barile, Grant Writing Assistance
- Jeremy Gorelick, Graduate Statistician
- Dr. Lori Thombs, Director of the Social Science Statistics Center

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- Pearl/Adams Shawn Lafrenz, Justin Gillespie
- Beall Percussion Specialty Instruments
- Percussion Music Online Tim Palmer
- PAS Scholarly Research Committee