

Musical Culture In Animated Film

4. Instruments of the Orchestra

Screening:

Toot, Whistle, Plunk & Boom (Disney, 1953)

(Adventures in Music series)

“The first animated cartoon to be filmed and released in [widescreen CinemaScope](#),^[1] *Toot, Whistle, Plunk and Boom* won the 1954 [Academy Award for Best Short Subject \(Cartoons\)](#). In 1994, it was voted #29 of the [50 Greatest Cartoons](#) of all time by members of the animation field.”

(Wikipedia)

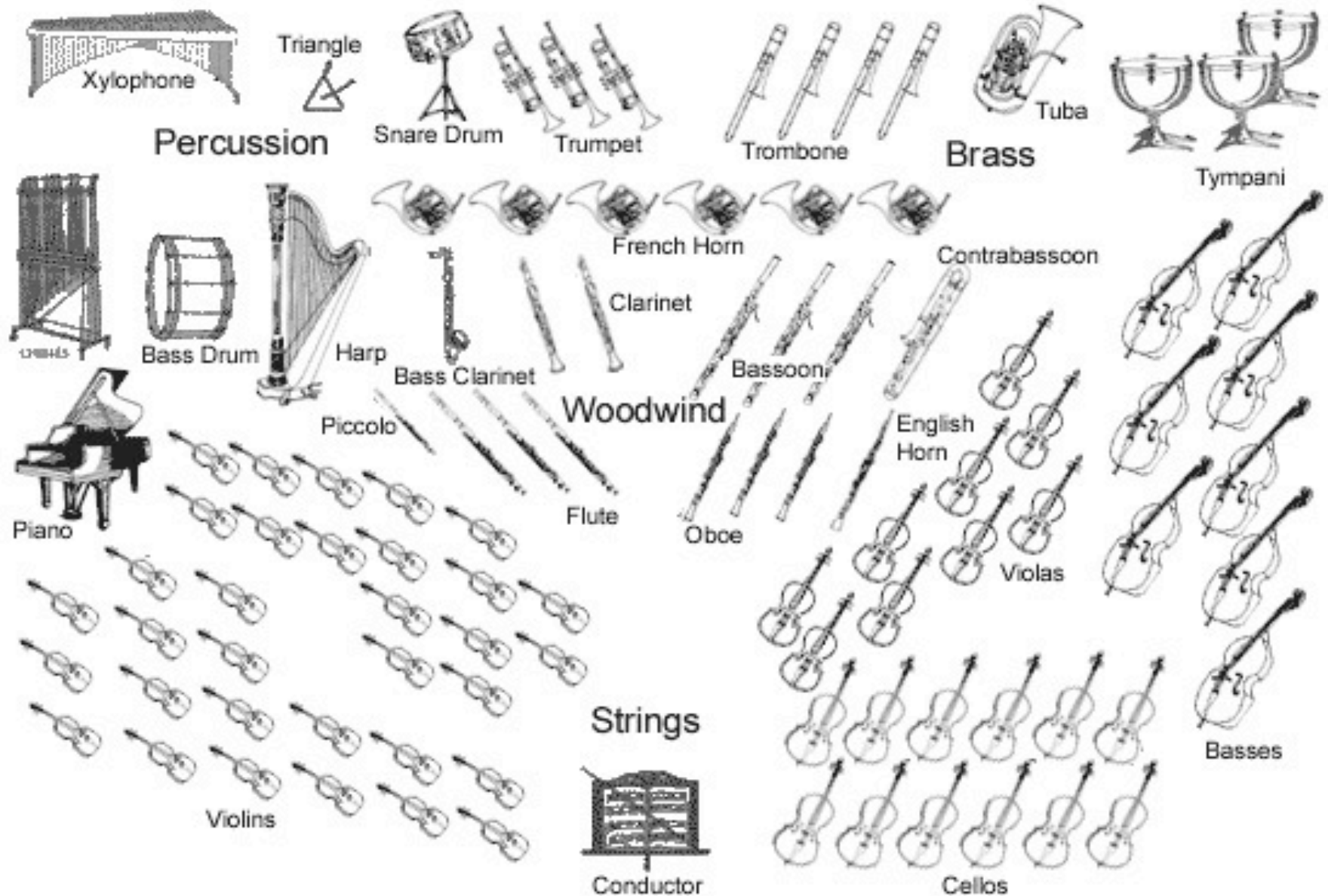


INSTRUMENTS OF THE SYMPHONY ORCHESTRA

INSTRUMENTS D'ORCHESTRE SYMPHONIQUE - STRUMENTI DELL'ORCHESTRA SINFONICA
INSTRUMENTOS DE LA ORQUESTRA SINFONICA - MUSIKINSTRUMENTE EINES SINFONIEORCHESTERS



Instruments of the Orchestra



Families of Instruments

- ◆ orchestra Instruments belong to one of four distinct families
- ◆ identified by their construction and/or method of sound production.

Families of Instruments

- ◆ The four families of orchestral instruments are:

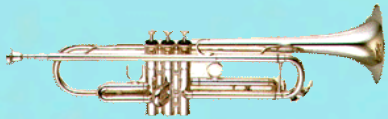


- ◆ Strings

- ◆ Woodwinds



- ◆ Brass



- ◆ Percussion



The Strings



- ◆ The string family constitutes the largest group within the symphony orchestra. It is the “backbone of the orchestra”
- ◆ four metal strings stretched across a neck and resonating body
- ◆ sound is produced by scraping a horsehair bow across the string, or by plucking.
- ◆ Come in a wide range of sizes and pitches, including Violin (smallest, highest), Viola, Violoncello and Double Bass (largest, lowest).



The violin evolved in Europe from Middle-Eastern stringed instruments such as the Rebab.



The Woodwinds

- ◆ Named for the material of construction - wood - and their method of tone production - the player's breath.
- ◆ diverse instruments and histories
- ◆ usual orchestra woodwinds include: flute, oboe, clarinet, bassoon. The saxophone is a later addition.
- ◆ Most woodwinds employ some form of reed - a small piece of cane - as the actual sound producing mechanism.



clarinet reed



Woodwind instruments:
Bassoon, Clarinet, Alto
Saxophone, Cor Anglais,
Oboe, Flute



The Brass

- ◆ named for the material of construction - brass
- ◆ Many different instruments, a few of which have become standardized as members of the orchestra
- ◆ usual orchestra brass include: Trumpet, French Horn, Trombone and Tuba



All instruments produce their sound by the buzzing of the player's lips inside the mouthpiece. The tone quality is modified by its long passage through the resonant brass tube and bell.



Orchestral Brass Instruments:
Trumpet, French Horn, Tuba, Trombone



The Percussion

- ◆ named for the method of tone production - all percussion instruments are struck - by the hands, with mallets, or via a more complex mechanism, as in the piano.
- ◆ encompass an extremely wide variety of instruments, only a few of which have found their way into the standard orchestra
- ◆ orchestra percussion include:
 - ◆ Timpani (Kettledrums)
 - ◆ snare drum
 - ◆ bass drum
 - ◆ cymbals
 - ◆ gong
 - ◆ glockenspiel
 - ◆ xylophone



Orchestral Percussion:



Screening:

Maurice Ravel - Bolero (Russian National Orchestra)

Take a sheet of paper and write down the name and type of the instrument on screen when the numbers from 1 - 10 are called out.

After the screening, trade your answers with a partner for marking.

Screening:

Bruno Bozzetto - “Bolero” from “Allegro non Troppo” (17min, 1976)

Discussion:

How did Bozzetto use the various instrumental colors as themes or ideas for animation? Were his ideas effective? How did he follow the overall musical development? How do you feel about his imaginative re-telling of the story of evolution? How is this piece an indirect homage to Disney?



disc 120

The Strings

1. The Violin

- ◆ The smallest and highest-pitched member of the string family. Aka “fiddle”
- ◆ from 10 to 32 violins in a typical orchestra
- ◆ strings are tuned G-D-A-E (lowest to highest). Appr. the range of a female voice.
- ◆ sound is produced by scraping a rosin-covered horsehair bow with the right hand.
- ◆ pitches are selected by placing fingers of the left hand down on the fingerboard.
- ◆ classically played “under-the-chin”, some folk styles (e.g. Cape Breton Fiddling) may hold the instrument away from the body



Violin made by Andrea Amati, Cremona, Italy, ca.1550



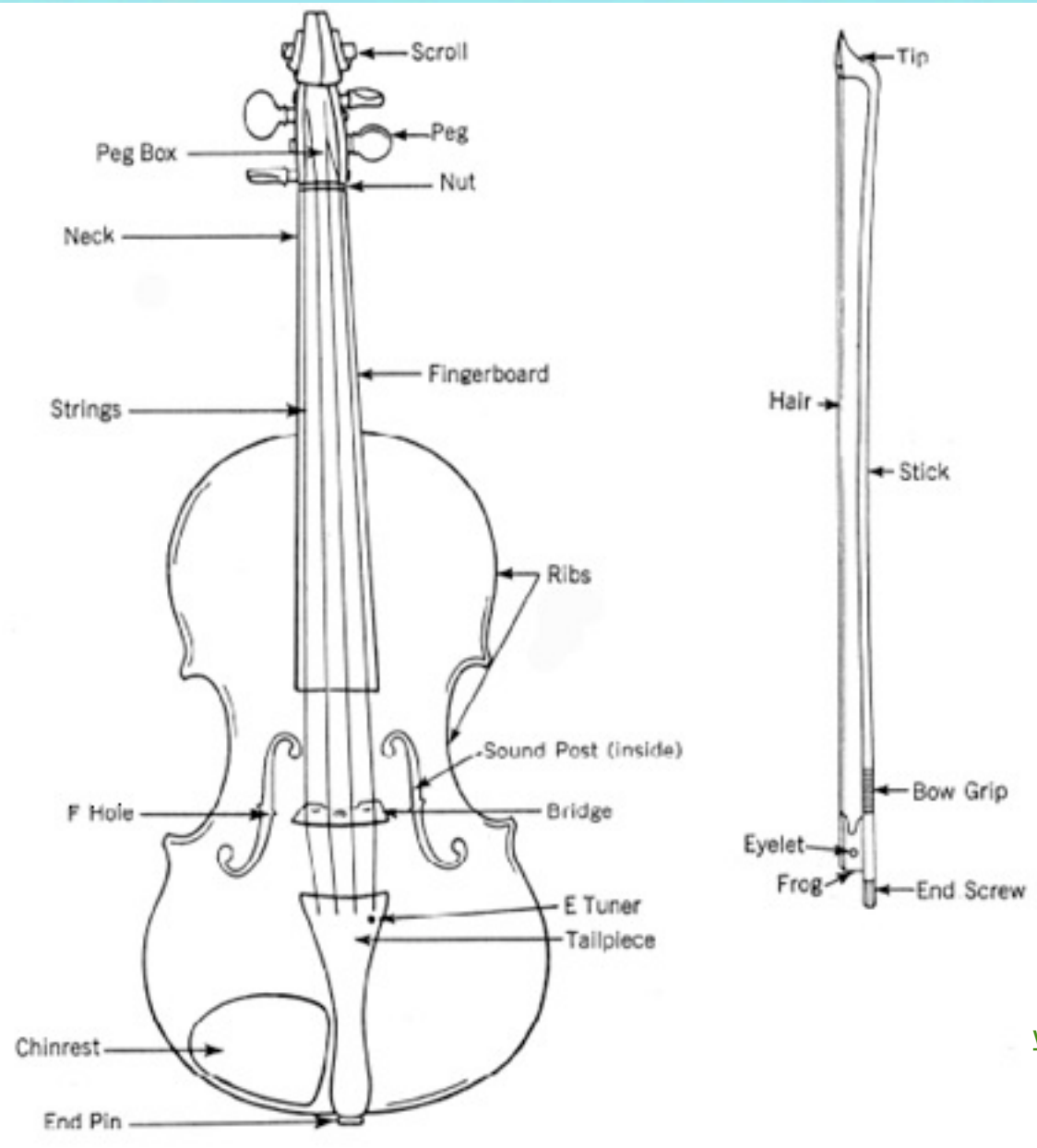
The Strings 1. The Violin



Disney Silly Symphony, *The Grasshopper and the Ants* (1934)
dir. Wilfrid Jackson

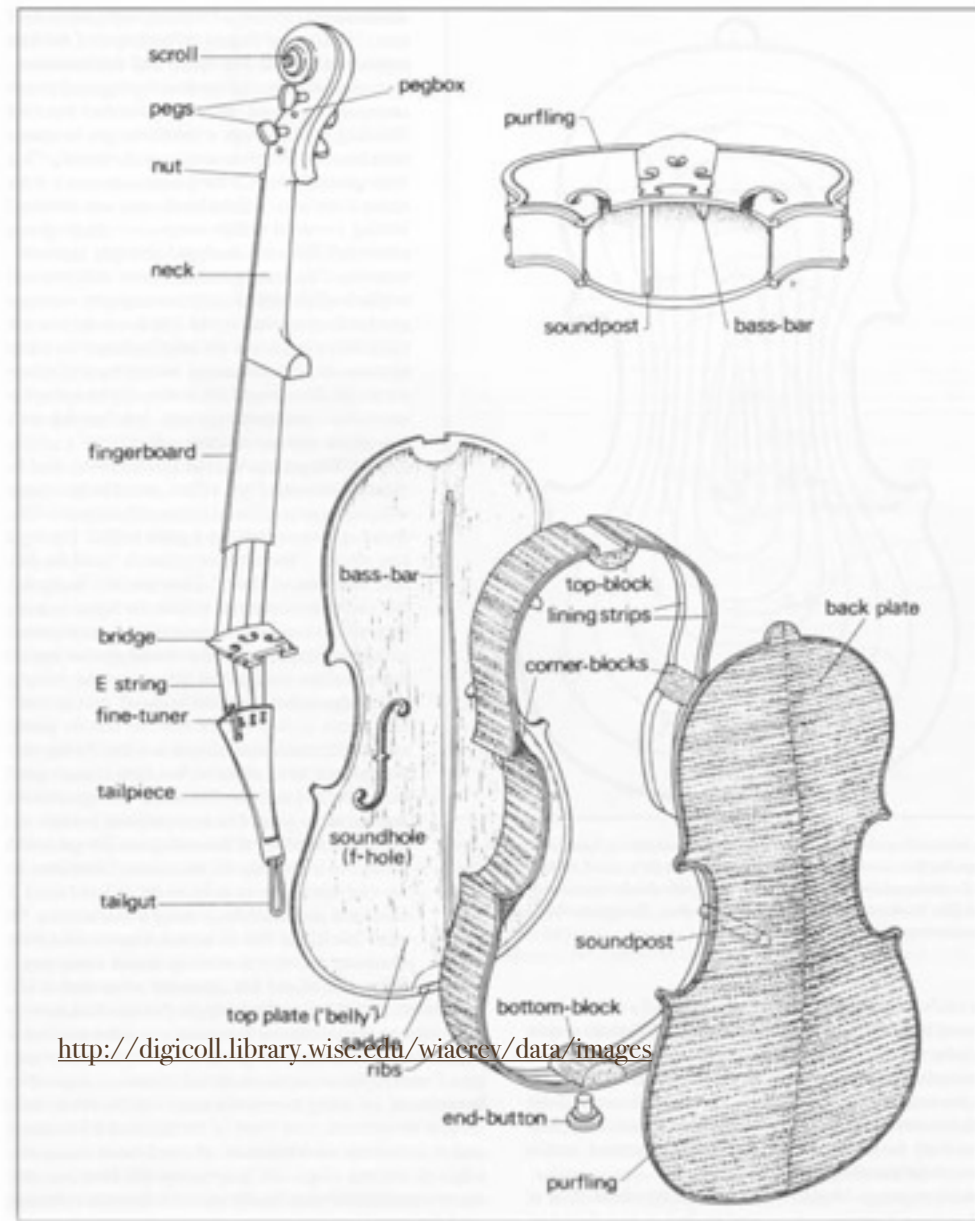
- story adapted from *Aesop's Fables*
- 'fiddling' grasshopper represented by solo violin
- Ants' activity also represented by violins (as a group of 20-30)
- Technicolor process (three strips: green - magenta - blue)

The Strings 1. The Violin



www.cmeabaysection.org

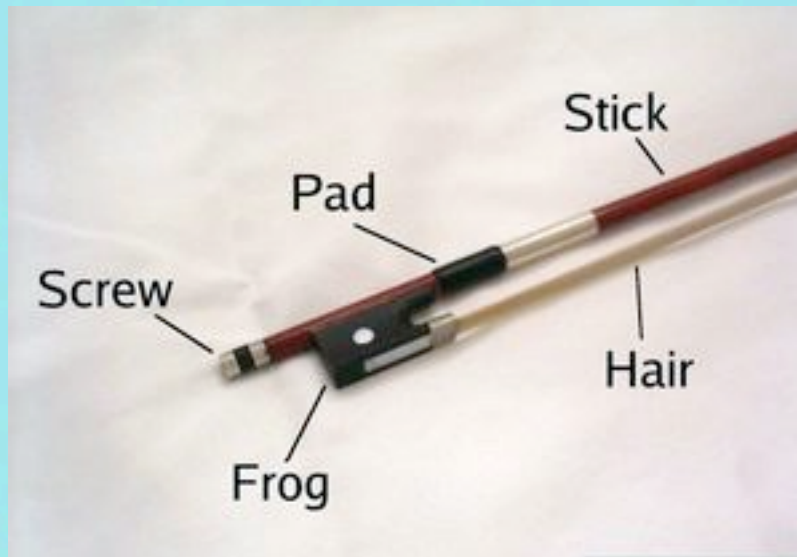
The Strings 1. The Violin



The Strings 1. The Violin

www.theviolinsite.com

* The Bow



The Strings 1. The Violin

- ◆ Capable of a wide range of expression & Style-
 - ◆ Bach - Violin Sonata 1-4 cut 1
 - ◆ Paganini - violin sonata #6 - cut 2
 - ◆ Gypsy Czardas - cut 3
 - ◆ Irish Drinking Song - cut 6
 - ◆ Cape Breton - Ashley MacIsaac - Rosin the Bow cut 8
 - ◆ Bluegrass - Death By Triple Fiddle - cut 9
- ◆ The sound of an individual instrument is quite distinct from the sound of a dozen or more playing together.



Solo Violin



Orchestra Violin Section



Screening: Peter and the Wolf

Disney - from "Make Mine Music" (15min, 1946)

OR

dir. Suzie Templeton (Oscar Winner, 22 min, 2008)

Discussion:

List the instruments used for the principal characters. To which instrumental families do they belong? Were the character assignments effective? How would you improve them? What other instruments could have been used?

disc 1004

Avant-garde techniques

STRINGS

- * Tone Clusters

- * Pendererecki - Threnody for the Victims of Hiroshima (1961)

- * Glissandi

- * Bernard Hermann - score to Psycho (1960)

Avant-garde techniques

BRASS

- * Flutter Tongue

- * R. Strauss - *Don Quixote*, “Battle with the Sheep” (1888)

- * Russell Garcia, score to *The Time Machine* (1960), “Morlocks”

- * Action Cue

- * David Arnold - score to *Independence Day*, “Fire Storm”

How Much Does an Orchestra Cost?

* **MUSICIAN'S FEES**

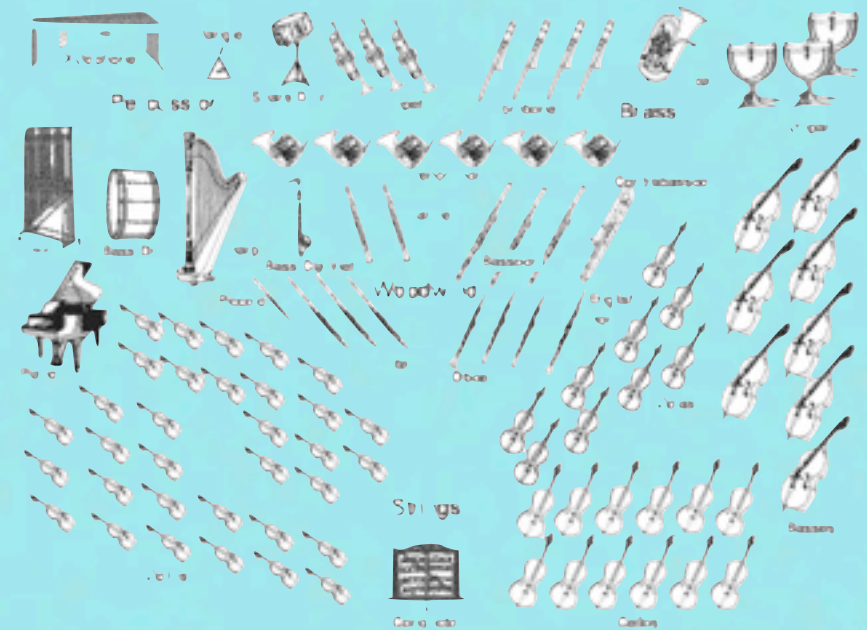
- * Union Scale for single studio session (3 hrs) = \$450
- * medium large orchestra = 60 players
- * total musician fees = \$27,600

* **RECORDING STUDIO**

- * \$800/hr x 3 hrs = \$2400

* **TOTAL COST per SESSION = \$30,000**

- * Each session will produce about 20-30 minutes of finished music recordings
- * from 2 to 4 sessions needed for a feature film



The Orchestra as a **Digital** Instrument

- * The expense of recording traditional orchestra has led to the simulation of the orchestral sound digitally, via *sampling* and *synthesis*.

