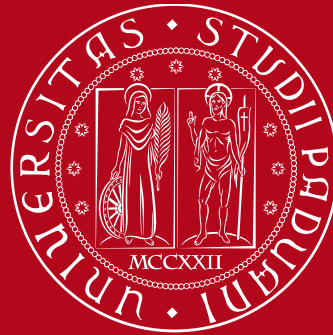


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Diventa più intelligente con Mozart!
Come nasce un mito della psicologia

I miti spesso nascono dalla realtà

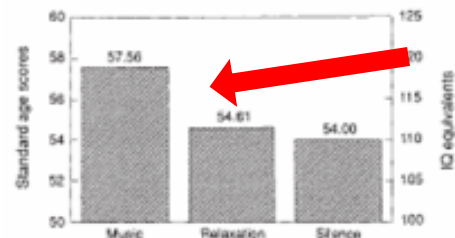
- Il mito che ascoltare Mozart renda più intelligenti nasce negli anni '90
- L'origine del mito è una ricerca pubblicata dalla prestigiosa rivista Nature



Music and spatial task performance

SIR—There are correlational¹, historical² and anecdotal³ relationships between music cognition and other 'higher brain functions', but no causal relationship has been demonstrated between music cognition and cognitions pertaining to abstract operations such as mathematical or spatial reasoning. We performed an

spatial IQ scores of 119, 111 and 110, respectively. Thus, the IQs of subjects participating in the music condition were 8–9 points above their IQ scores in the other two conditions. A one-factor (listening condition) repeated measures analysis of variance (ANOVA) performed on SAS revealed that subjects



Standard age scores for each of the three listening conditions.

Testing procedure. In the music condition, the subject listened to 10 min of the Mozart piece. The relaxation condition required the subject to listen to 10 min of relaxation instructions designed to lower blood pressure. The silence condition required the subject to sit in silence for 10 min. One of three abstract reasoning tests taken from the Stanford–Binet intelligence scale⁴ was given after each of the listening conditions. The abstract/spatial reasoning tasks consisted of a pattern analysis test, a multiple-choice matrices test and a multiple-choice paper-folding and cutting test. For our sample, these three tasks correlated at the 0.01 level of significance. We were thus able to treat them as equal measures of abstract reasoning ability.

Scoring. Raw scores were calculated by subtracting the number of items failed from the highest item number administered. These were then converted to SAS using the Stanford–Binet's SAS conversion table of normalized standard scores with a mean set at 50 and a standard deviation of 8. IQ equivalents were calculated by first multiplying each SAS by 3 (the number of subtests required by the Stanford–Binet for calculating IQs). We then used their area score conversion table, designed to have a mean of 100 and a standard deviation of 16, to obtain SAS IQ equivalents.

experiment in which students were each given three sets of standard IQ spatial reasoning tasks; each task was preceded by 10 minutes of (1) listening to Mozart's sonata for two pianos in D major, K488; (2) listening to a relaxation tape; or (3) silence. Performance was improved for those tasks immediately following the first condition compared to the second two.

Thirty-six college students participated in all three listening conditions. Immediately following each listening condition, the student's spatial reasoning skills were tested using the Stanford–Binet intelligence scale⁴. The mean standard age scores (SAS) for the three listening conditions are shown in the figure. The music condition yielded a mean SAS of 57.56; the mean SAS for the relaxation condition was 54.61 and the mean score for the silent condition was 54.00. To assess the impact of these scores, we 'translated' them to

performed better on the abstract/spatial reasoning tests after listening to Mozart than after listening to either the relaxation tape or to nothing ($F_{2,35} = 7.08$; $P = 0.002$). The music condition differed significantly from both the relaxation and the silence conditions (Scheffe's $t = 3.41$, $P = 0.002$; $t = 3.67$, $P = 0.0008$, two-tailed, respectively).

The relaxation and silence conditions did not differ ($t = 0.795$; $P = 0.432$, two-tailed). Pulse rates were taken before and after each listening condition. A two-factor (listening condition and time of pulse measure) repeated measures ANOVA revealed no interaction or main effects for pulse, thereby excluding arousal as an obvious cause. We found no order effects for either condition presentation or task, nor any experimenter effect.

The enhancing effect of the music condition is temporal, and does not extend beyond the 10–15-minute period during which subjects were engaged in each spatial task. Inclusion of a

delay period (as a variable) between the music listening condition and the testing period would allow us quantitatively to determine the presence of a decay constant. It would also be interesting to vary the listening time to optimize the enhancing effect, and to examine whether other measures of general intelligence (verbal reasoning, quantitative reasoning and short-term memory) would be similarly facilitated. Because we used only one musical sample of one composer, various other compositions and musical styles

should also be examined. We predict that music lacking complexity or which is repetitive may interfere with, rather than enhance, abstract reasoning. Also, as musicians may process music in a different way from non-musicians, it would be interesting to compare these two groups.

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1. Hecker, M., Bittsauer, N. & Fell, A. *Psychol. Music* **13**, 99–113 (1985).
2. Altman, G. *J. Great Geometry from Thales to Euclid*, 23 (Amo, New York, 1976).
3. Crainberg, L. D. & Albert, M. L. in *The Exceptional Brain* (eds Oiler, L. K. & Fern, D.) 156 (Quillford, New York, 1988).
4. Thorndike, R. L., Hagen, E. P. & Sattler, J. M. *The Stanford–Binet Scale of Intelligence* (Riverside, Chicago, 1986).



MURRAY PERAHIA • RADU LUPU

MOZART: SONATA, K. 448
(D MAJOR / D-DUR / RÉ MAJEUR)

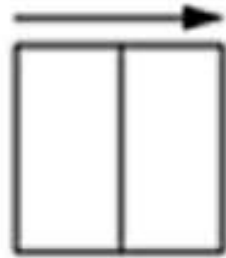
CHUBERT: FANTASIA, OP. 103, D. 940
(F MINOR / F-MOLL / FA MINEUR)



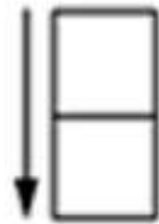
Piega così...



poi così...



poi così...

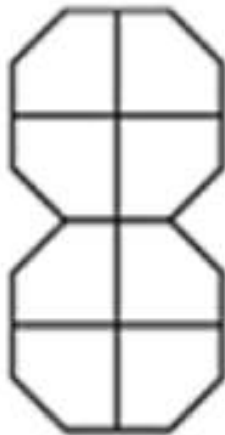


poi taglia con una
forbice così

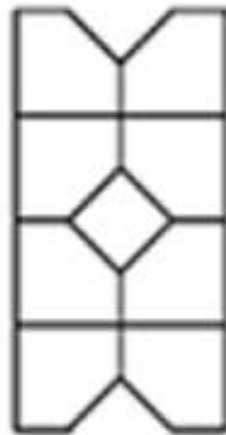


Paper cutting and folding task

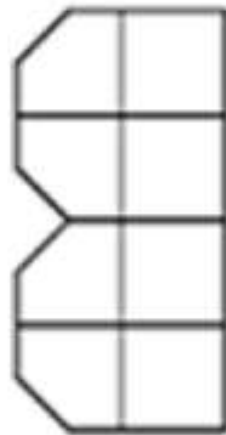
Se adesso aprissi il foglio, come si presenterebbe?



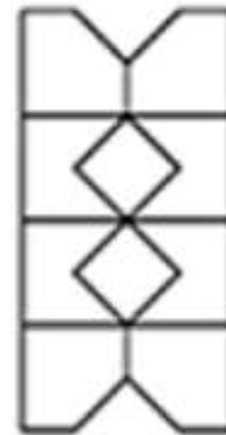
A



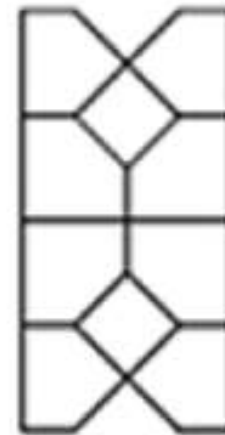
B



C



D



E

Mozart!

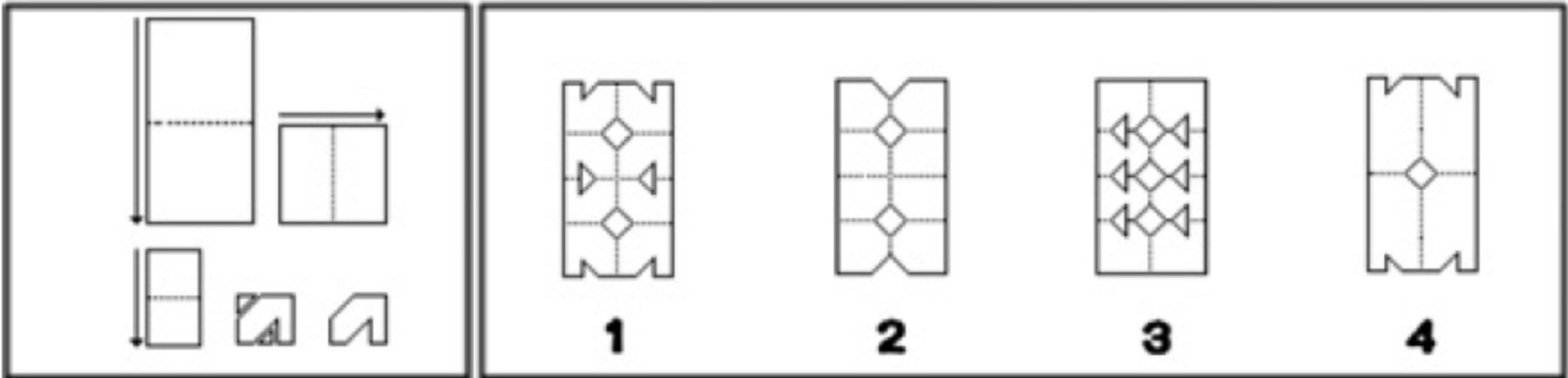
Una pillola per l'intelligenza!

- Dieci minuti di Mozart sono sufficienti per migliorarvi in una prova che fa parte di un test di intelligenza!
- Troppo bello!

To assess the impact of these scores, we 'translated' them to spatial IQ scores of 119, 111 and 110, respectively. Thus, the IQs of subjects participating in the music condition were 8–9 points above their IQ scores in the other two conditions.



Zoom ID: 927-459-024



Georgia's Governor Seeks Musical Start for Babies

By Kevin Sack

Jan. 15, 1998



See the article in its original context from January 15, 1998, Section A, Page 12 | [Buy Reprints](#)

As it is, newborn children in Georgia often come home from the hospital with a bag of free goodies: baby wipes, diapers, instructions about breast feeding and immunizations. Now Gov. Zell Miller wants to throw in a little something extra: a cassette tape or compact disc of classical music.

The music would not be intended to soothe the frayed nerves of parents getting their first doses of sleep-deprivation from their colicky babies. Rather, Mr. Miller, a devoted fan of country and bluegrass music, is convinced that Bach and Mozart can stimulate brain development at very early ages.



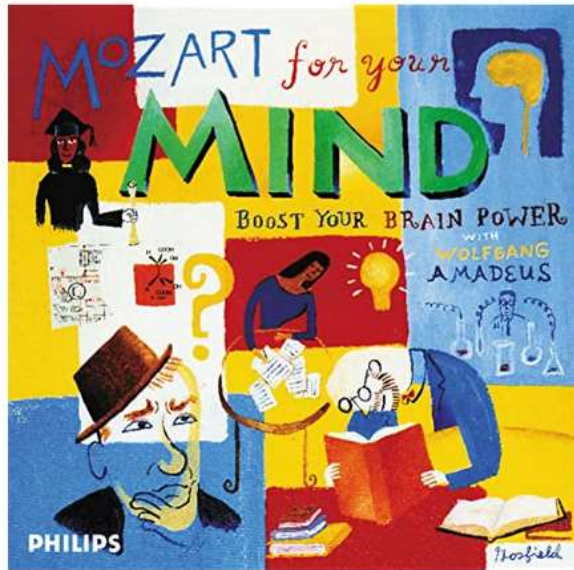
Mozart for Pregnant Women and Newborns
Nederica Stepan
October 7, 2012

\$17.98

Get a special offer and listen to over 60 million songs, anywhere with Amazon Music Unlimited. Get a special offer and listen to over 60 million songs, anywhere with Amazon Music Unlimited. Get a special offer and listen to over 60 million songs, anywhere with Amazon Music Unlimited. Get a special offer and listen to over 60 million songs, anywhere with Amazon Music Unlimited. Renew automatically. New subscribers only. Limited time offer. Terms apply.

\$17.98 to buy





Mozart For Your Mind - Boost Your Brain Power

Various artists

January 17, 1995



79 ratings

amazon
warehouse

Amazon Warehouse

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Top positive review

[See all 59 positive reviews](#) ›



Marlene

★★★★★ **Mind support!!**

Reviewed in the United States on July 7, 2019

I have used these Mozart for your mind in a lot of classes and helping students to focus and learn. Good soft music & supportive to learning.



Amazon Customer

★★★★☆ **its OK**

Reviewed in the United States on August 26, 2015

Format: MP3 Music | **Verified Purchase**

I found it is a little boring

Helpful

▼ [Comment](#)

[Report abuse](#)

Zoom ID: 927-459-024

Facebook interface showing a post from a user named [redacted]. The post is dated 19 giugno 2018 and is from Napoli, Campania. The text of the post discusses the benefits of prenatal music listening, specifically mentioning Mozart and baroque composers, and their effects on a child's cognitive and emotional development. It also mentions a project called 'MIA MAMMA È MARIA CALLAS' and provides contact information for a mini-concert.

Post Content:

La psicologa Frances Rauscher ha dimostrato come l'ascolto prenatale di Mozart e di altri compositori barocchi possa essere associato ad un incremento delle competenze spazio-temporali nel corso della vita. Un'altra ricerca dimostra che la musica classica, in particolare i movimenti lenti delle composizioni barocche o in stile barocco con la ricchezza melodica che le contraddistingue e il loro ritmo di 55-70 battiti al minuto, sposta il cervello da uno stato B di iperattività ad uno stato A di vigilanza e rilassamento. La musica classica stimola il rilascio di endorfine e riduce il livello degli ormoni dello stress nel sangue dando beneficio sia alla madre che al bambino.

MIA MAMMA È MARIA CALLAS - quando i bambini si danno delle arie!
 Progetto pedagogico musicale di educazione all'ascolto.

Mini-concerto interattivo presso scuola materna info@torredibabele.com

[redacted]
 [redacted]

Community Section:

Community

una pedagista musicale. nel corso degli ultimi anni ha sper...

Altro...

Community Mostra tutti

Invita i tuoi amici a mettere "Mi piace" a questa Pagina

Piace a 1650 persone

Follower: 1679

Zoom ID: 927-459-024

Troppo bello per essere vero?

- In molti si sono domandati se quel primo risultato fosse eccezionale (magari semplicemente fortuito) e hanno lavorato per capire perché quel risultato si fosse verificato
- Perché si verifica il “Mozart effect”?

Research Report

THE MOZART EFFECT: An Artifact of Preference

Kristin M. Nantais¹ and E. Glenn Schellenberg²

¹University of Windsor, Windsor, Canada, and ²University of Toronto, Mississauga, Canada

Abstract—The “Mozart effect” reported by Rauscher, Shaw, and Ky (1993, 1995) indicates that spatial-temporal abilities are enhanced after listening to music composed by Mozart. We replicated and extended the effect in Experiment 1: Performance on a spatial-temporal task was better after participants listened to a piece composed by Mozart or by Schubert than after they sat in silence. In Experiment 2, the advantage for the music condition disappeared when the control condition consisted of a narrated story instead of silence. Rather, performance was a function of listeners’ preference (music or story), with better performance following the preferred condition.

Giriamo il disco: Mozart vs Schubert

Table 1. Mean number of items correct in Experiments 1 and 2

Experiment	N	Condition			
		Music		Control	
1	28	Mozart	12.75 (3.38)	Silence	11.89 (3.59)
	28	Schubert	12.36 (4.05)	Silence	11.04 (4.61)
2	28	Mozart	13.00 (3.80)	Story	12.93 (2.91)

Note. Standard deviations are given in parentheses.

Qualche conclusione

- La musica di Mozart è sufficiente ma non necessaria: possiamo usare anche la musica di Schubert (ma anche un audio libro, a patto che ci piaccia)

Research Report

AROUSAL, MOOD, AND THE MOZART EFFECT

William Forde Thompson,¹ E. Glenn Schellenberg,² and Gabriela Husain¹

¹York University, Toronto, Ontario, Canada, and ²University of Toronto, Mississauga, Ontario, Canada

Abstract—*The “Mozart effect” refers to claims that people perform better on tests of spatial abilities after listening to music composed by Mozart. We examined whether the Mozart effect is a consequence of between-condition differences in arousal and mood. Participants completed a test of spatial abilities after listening to music or sitting in silence. The music was a Mozart sonata (a pleasant and energetic piece) for some participants and an Albinoni adagio (a slow, sad piece) for others. We also measured enjoyment, arousal, and mood. Performance on the spatial task was better following the music than the silence condition, but only for participants who heard Mozart. The two music selections also induced differential responding on the enjoyment, arousal, and mood measures. Moreover, when such differences were held constant by statistical means, the Mozart effect disappeared. These findings provide compelling evidence that the Mozart effect is an artifact of arousal and mood.*

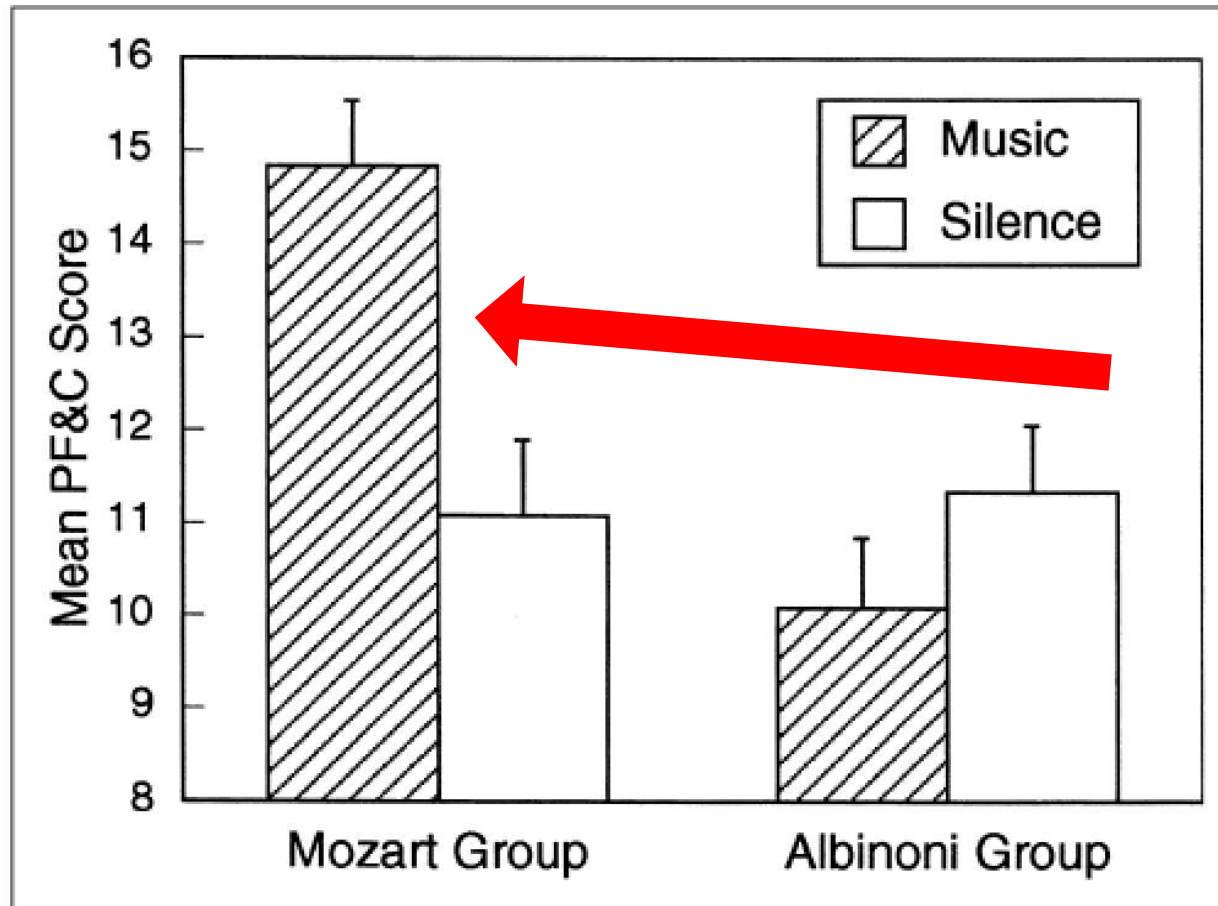


Fig. 1. Participants' mean scores on the paper-folding-and-cutting (PF&C) task after sitting in silence or listening to music. Each participant was tested in a silence condition and a music condition. Half of the participants heard Mozart in the music condition. The other half heard Albinoni. Error bars illustrate standard errors.

Qualche conclusione

- La musica di è sufficiente, ma deve essere allegra: la musica triste non riesce a rivelare il “Mozart effect”

Music Listening and Cognitive Abilities in 10- and 11-Year-Olds: The Blur Effect

E. GLENN SCHELLENBERG^a AND SUSAN HALLAM^b

^aDepartment of Psychology, University of Toronto at Mississauga, Mississauga, Ontario, Canada L5L 1C6

^bInstitute of Education, University of London, London, United Kingdom

ABSTRACT: The spatial abilities of a large sample of 10 and 11 year olds were tested after they listened to contemporary pop music, music composed by Mozart, or a discussion about the present experiment. After being assigned at random to one of the three listening experiences, each child completed two tests of spatial abilities. Performance on one of the tests (square completion) did not differ as a function of the listening experience, but performance on the other test (paper folding) was superior for children who listened to popular music compared to the other two groups. These findings are consistent with the view that positive benefits of music listening on cognitive abilities are most likely to be evident when the music is enjoyed by the listener.

**Mozart
effect con
la musica
dei Blur**

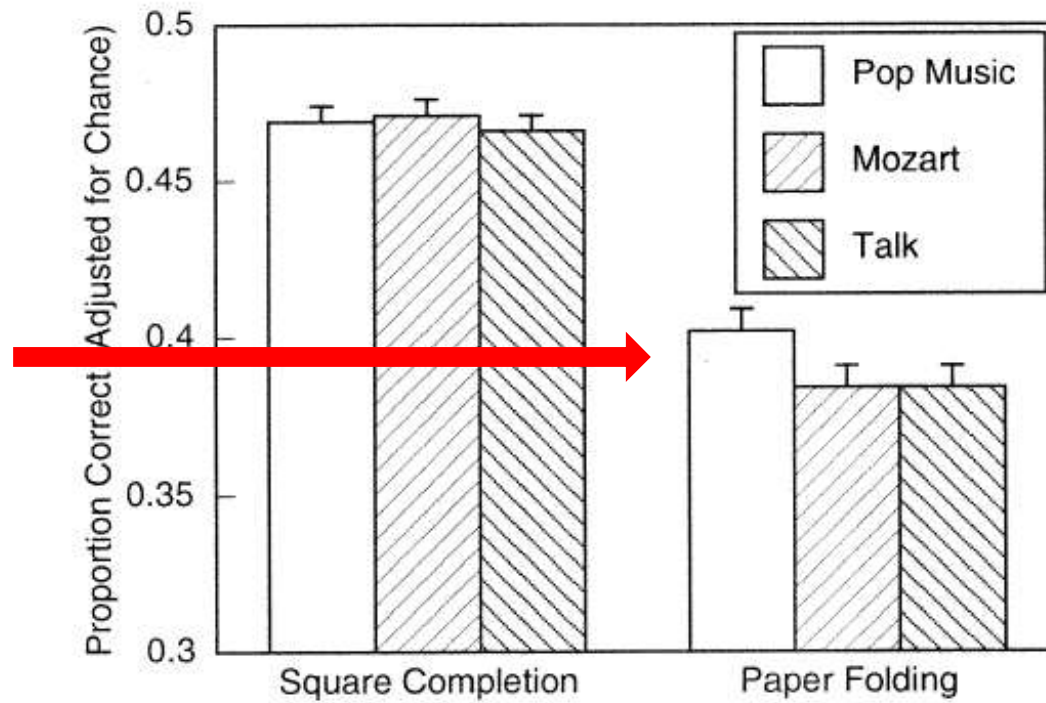


FIGURE 2. Children's performances on the square-completion and paper-folding tasks as a function of the prior listening experience.

Qualche conclusione

- La musica che ci piace (ad esempio, i Blur) funziona meglio di Mozart per rivelare il “Mozart effect”

Che cos'è il “Mozart effect”?

- Miglioramento piccolo della prestazione in compiti visuo-spaziali che si verifica dopo aver ascoltato della musica allegra che ci piace
- E' un effetto di breve durata
- Non è un effetto cumulativo! (es. più ascolto, più migliore)

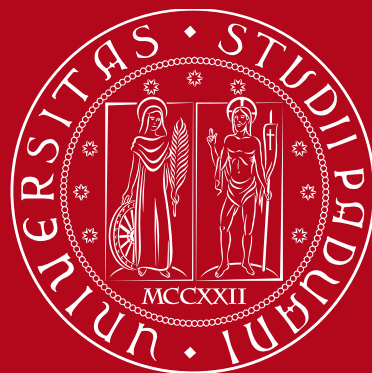
Perché si verifica?

- Perché alcune musiche sono in grado di migliorare il tono del nostro umore e di attivarci e quando siamo di buon umore e “attivati” solitamente facciamo meglio di quando siamo di cattivo umore e spenti

Quindi?

- Ascoltare musica ci fa diventare più intelligenti? NO!
- Però, ascoltare musica (a volte) può metterci nelle condizioni di rendere al meglio! Al nostro meglio!

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