Berg, Lyric Suite III (Allegro misterioso)

[Notation shows three tetrachords at opening, bar 1, and
three tetrachords at close, bar 137)

The set-name is 4-5.

	Integer notation for pc set	Cyclic notation	Permutation Number (see list of elements)		Bip
a	10 9 5 11	(0)(1)(2)(3)	p1	0 order inversions	146
b	9 10 11 5	(01)(23)	p22	2 order inversions	116
c	9 10 5 11	(01)	p8	1 order inversion	156
d	11 5 10 9	(0312) (1302)	[p6]	5 order inversions	156
e	5 11 10 9	(02)(13)	p23	4 order inversions	116
f	11 5 9 10	(03)(12)	p24	6 order inversions (max)	146

In a,b,c the dyads 9 10 and 5 11 are held fixed.
In d,e,f the same are held fixed but the order-
position of the dyads are reversed.

f is the reverse of a, e the reverse of b, d the
reverse of c. The sum of order inversions in each case is 6 (inverse pairs)

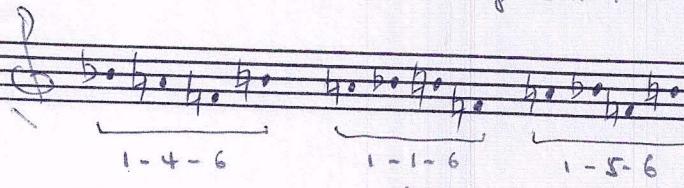Here the bips show the correspondence of retrogrades.
[When the retrograde is regarded as the extreme case
secondary, the bip remains the same. The same relation
holds between any equivalent 1302 M
bips.

Bar 1

pc set 4-5

1 - 4 - 6   1 - 1 - 6   1 - 5 - 6

Bar 137

6 - 5 - 1   6 - 1 - 1   6 - 4 - 1

thrus bips   116 (2)
146 (4)
156 (2)
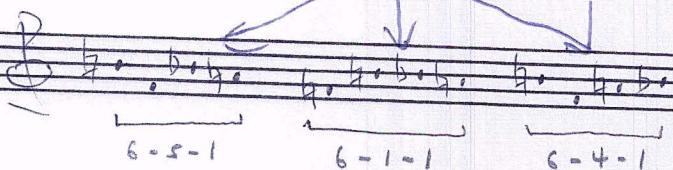
Analysis of Berg Lyric Suite example in terms of
permutation theory (group)

p22,p23, and p24 comprise the set of even permutations in class (2)(2)

They form a subgroup with the identity p1 as shown in the group
table below:

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    1   22   23   24

   22    1   24   23

   23   24    1   22

   24   23   22    1
```


                p22   to
Both p6 and ~~p22~~ belong ~~the~~ the subgroup generated by powers of p6

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    1    4    6   22

    4   22    1    6

    6    1   22    4

   22    6    4    1
```


Each of the following is its own ~~~~ inverse: p8,p22,p23,p24 (shown
in table above).