Misperceptions in the Labor Market
Evidence from the US

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RED — Rome Economics Doctorate

Motivation

Job-to-Job movements as motor of wage growth:

- About 30% of lifetime wage growth explained by job mobility *across* firms
- Effect particularly strong at start of career

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Workers needs to predict the **number** and **value** of offers they will receive

- Unavailability of info might lead to wrong prediction
- Systematic prediction error might have real consequences
- Search models usually rely on untested assumption of workers' rationality

Our Contribution

1) Descriptive Evidence

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- Workers overestimate the number of offers (Offer Overprediction)
- They overestimate the wage offered (Wage Overprediction)

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2) Consequences for the Labor Market

- Misperceptions ↑ the wage needed to attract the worker, leading to rejection of "marginal" offers
- Inefficient long attachment to "temporary" low-paying jobs
- Fatter left tail of wage distribution

The Literature

Quickly expanding literature on beliefs in the Labor Market (LM):

- **Menzio** (NBER WP, 2022): theoretical paper introducing stubborn beliefs in search models. This amplifies negative LM fluctuations.
- **Mueller & Spinnewijn** (HEE, 2022): overestimation of Job Finding Probability (JFP) and Job Losing Probability (JLP) for unemployed in US.
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Our contribution:

- ✓ Agree about optimism
- ＋ From aggregate to **individual** measures
- ＋ Decompose misperceptions between offers and wages
- ≠ Focus on **employed** workers and job ladder

The Literature

- **Jäger et al.** (R&R @ QJE, 2023): shows, with survey + MEE in Germany, that workers anchor beliefs about outside option to their current wage.

Our contribution:

- ✕ Opposite result about direction of bias
  - ▶ They compare expectations with **accepted** offers of coworkers
  - ▶ Different context
- + We show positive errors in **offers** received

1. Descriptive Evidence

Data: Overview

Two representative surveys from FRBNY: Core and Labor [2013m6:2023m5]

- N = 1,300 hh heads each wave
- Rotating panel structure (max 1 yr in sample)
- Attrition: 26% for first follow up, flat in following interviews
- The Core is monthly, main variables:
  - ▸ Employment status demographics
  - ▸ $\mathbb{E}^i_{3m}(JFP)$
- The Labor module is quarterly (more in next slide)
- Winsorize continuous unbounded variables at 5%
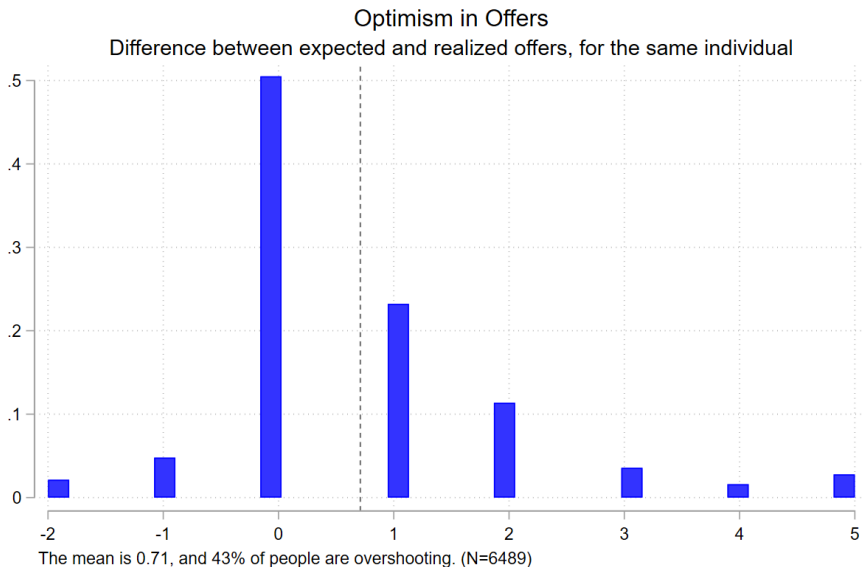
Data: Offers Overprediction

In particular, the Labor Module asks the following questions:

- "How many offers will you receive in the next four months?" $\mathbb{E}^i_{t-1}(n_{ti})$
- "How many offers have you received in the last four months?" n_{ti}

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- "How many offers will you receive in the next four months?" $\mathbb{E}_{t-1}^{i}(n_{ti})$
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We will leverage the panel dimension to build a measure of Offer Optimism :

- For each individual i , $\Delta_i(n) = \mathbb{E}_{t-1}^{i}(n_{ti}) - n_{ti}$
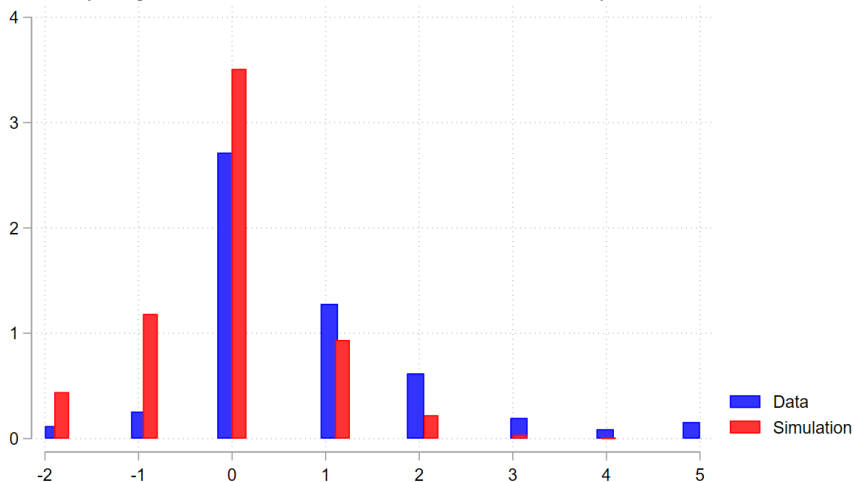- When $\Delta_i(n_{ti}) > 0$ workers are "optimist"

Offers Overprediction

Optimism in Offers
Difference between expected and realized offers, for the same individual

The mean is 0.71, and 43% of people are overshooting. (N=6489)

Offers Overprediction
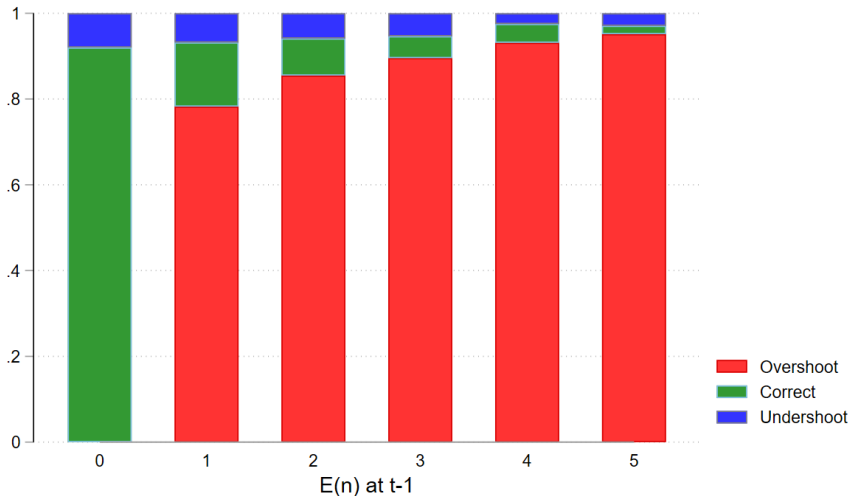

Optimism in Offers

Comparing the data and a Poisson simulation with rational predictions
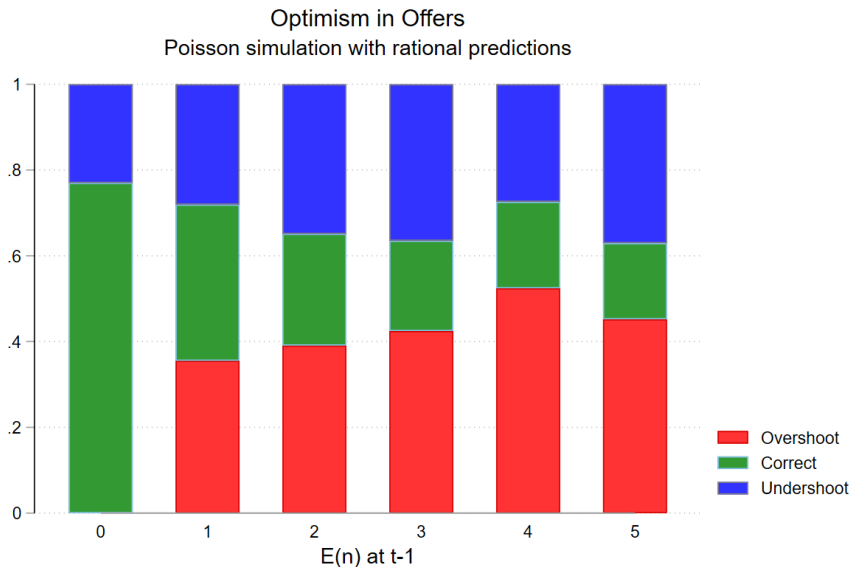
The mean of the simulated errors is 0.

Offers Overprediction

Optimism in Offers
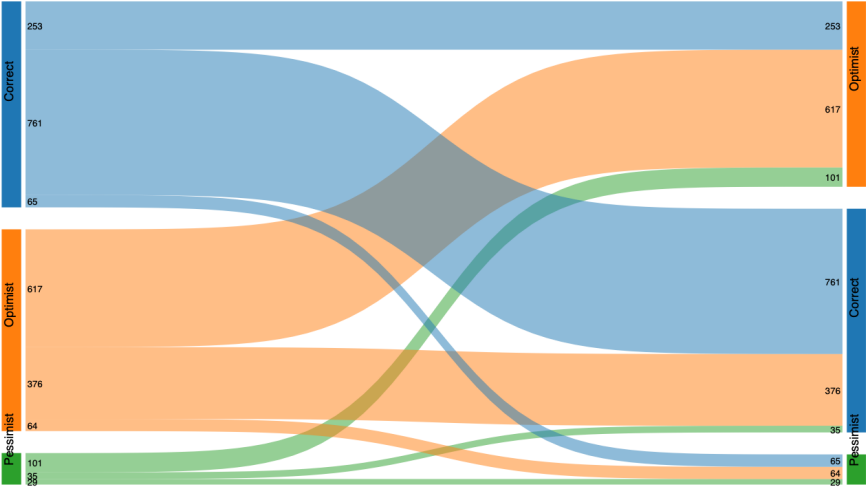By type of prediction mistake

Offers Overprediction

Optimism in Offers
Poisson simulation with rational predictions

Persistence

Persistence of Optimism
In terms of offers (Expected vs Received)

Data: Wage Overprediction

Labor Module asks the following questions:

- "What is the average wage that you expect to receive in the next four months?" $\mathbb{E}_{t-1}^i(\overline{w}_{ti})$

- "What is the best wage that you expect to receive in the next four months?" $\mathbb{E}_{t-1}^i(w_{ti}^{max})$

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- For each (up to three) realized offer:
    1. "What was the salary of each offer?"
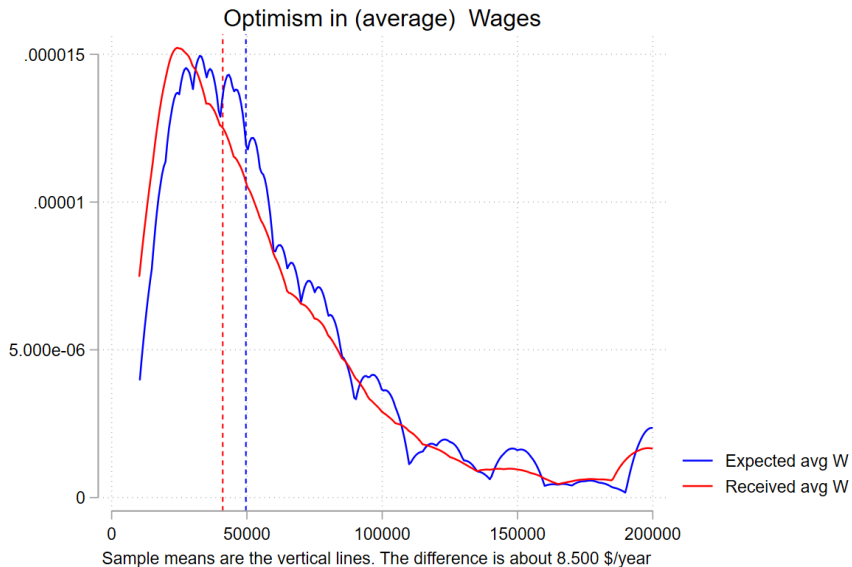   2. "Was it part time or full time?"
    3. "Did you accept it?"

Data: Wage Overprediction

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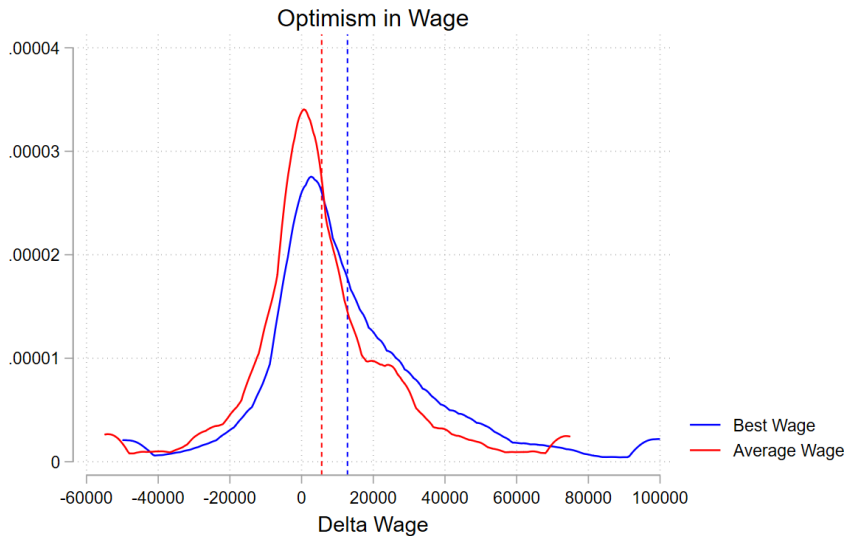 2. "Was it part time or full time?"
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We will leverage the panel dimension to build a measure of Wage Optimism:

- $\Delta_i(\overline{w}_i) = \mathbb{E}_{t-1}^i(\overline{w}_{ti}) - (\sum_{n=1}^{N} w_{nti}) \frac{1}{N_t}$
- $\Delta_i(w_i^{max}) = \mathbb{E}_{t-1}^i(w_{ti}^{max}) - max(w_{1ti}; w_{2ti}; w_{3ti})$

Wage Overprediction : Everyone

Optimism in (average) Wages

Sample means are the vertical lines. The difference is about 8.500 $/year

Legend:
- Expected avg W
- Received avg W

Wage Overprediction: Within Workers

Optimism in Wage

Delta(Avg. W= 5604); Delta(Best W)=12802; N=1213

Evidence: Wrap-up

We analyze data of expectations of employed US workers about job offers, and compare them with their realization.

We found the following:

1. Workers overestimate the arrival rate of offers
2. They overestimate the wage they will be offered
3. Overestimation is persistent: those that turn out to be optimist don't adjust their beliefs

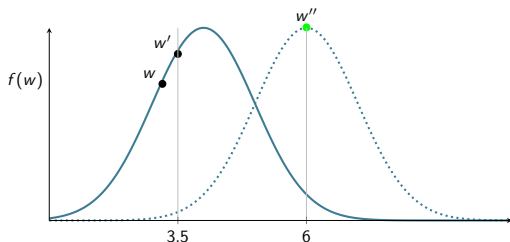Possible explanations here , heterogeneity by income here

2. Consequences

Labor Market Consequences

We want to augment an On the Job Search model with these ingredients:

1. A % of optimist workers, overestimating $F(w)$ and λ
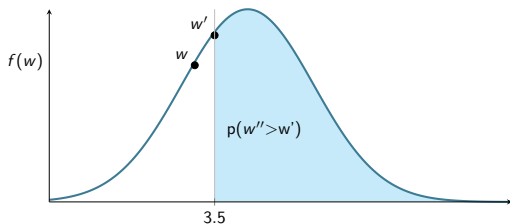2. Opportunity cost of accepting a job ($\approx$ limited number of moves)

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Consider the decision to accept an offer $w' = w + \epsilon$ as follows:

- If only wage-optimist I
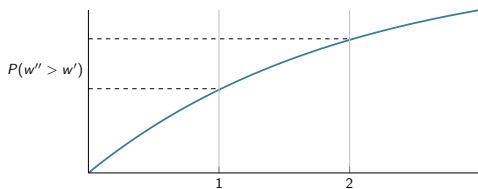 expect $w'' >> w'$ next time
  $\implies$ Reject w'

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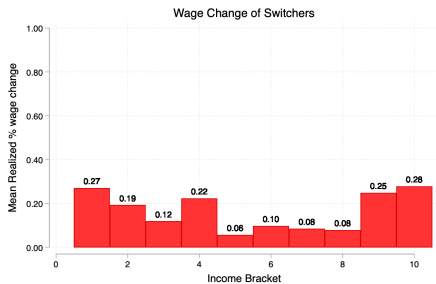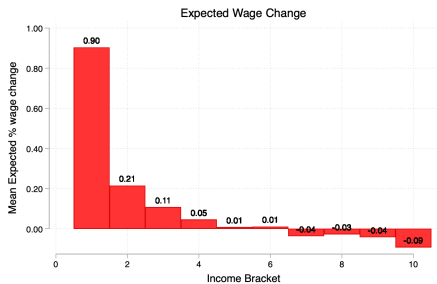- The two biases together make the problem worse!
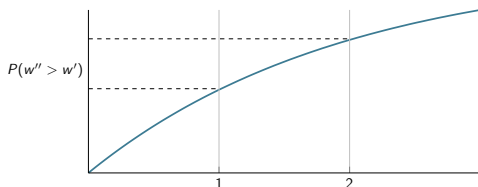
Labor Market Consequences

The rejection of marginally better offers by biased workers has the following consequences:
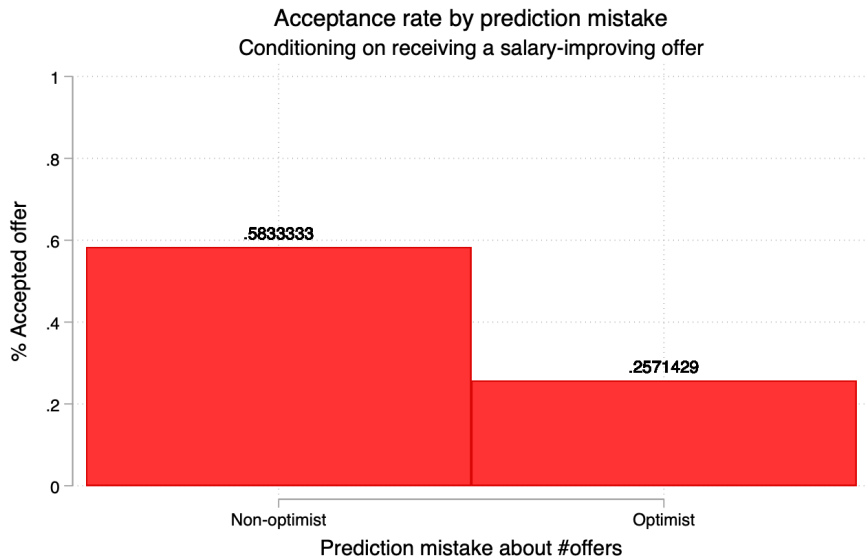
1. Slower career progression
2. Fatter left tail of the wage distribution
3. Inefficient survival of low productivity firms

Suggestive Evidence

Expected Wage Change

Wage Change of Switchers

Suggestive Evidence

Acceptance rate by prediction mistake
Conditioning on receiving a salary-improving offer

Discussion

In short:

1 We present evidence that US workers overestimate the offer distribution and the number of offers they receive

2 This has negative efficiency consequences through rejection of marginal offers

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Next steps:
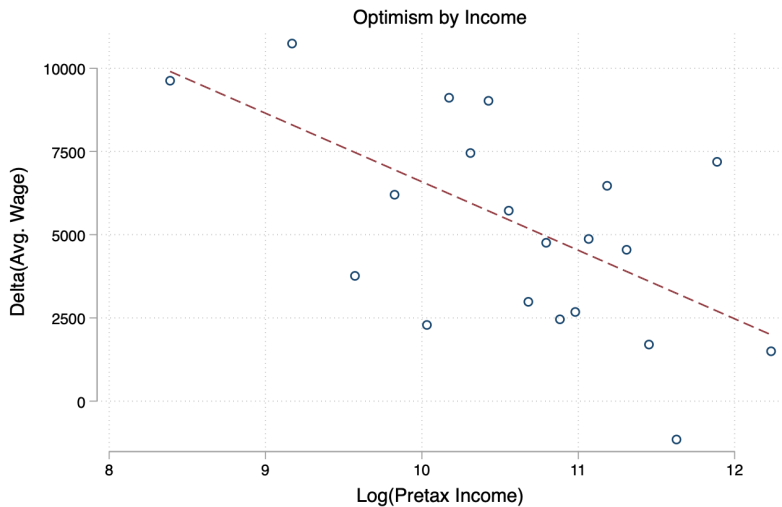
1 Concile anchoring with optimism

2 Extend evidence to EU countries

3 Heterogeneity in optimism

4 Microfound opportunity cost of accepting

Thanks!

Optimism and Income

Optimism by Income
Binscatter with Linear fit of prediction error by income level
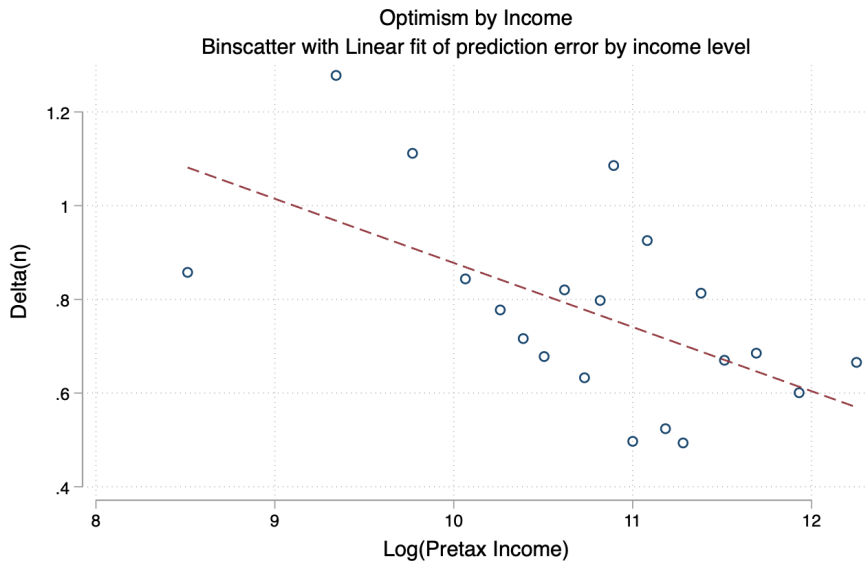
Optimism and Income

Optimism by Income

Making Optimism Make Sense

Possible Explanations:

1. **Selective Memory**: workers base their prediction on a biased selection of periods, choosing those in which they received larger offers.

Back

Comparison with Muller & Spinnewijn (2022) and Balleer et al. (2023)

Both these papers show that in general there is are optimism and pessimism. Moreover, they show that optimism increases the reservation wage, but pessimism decreases it. Net effect is unclear. Click here to go back.