How Debt Repayment Strategy Affects Motivation

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Which debt should you repay first?

	A	B
Owing	**$4500**	**$500**
Rate	**12%**	**24%**

Which debt should you repay first?

	A	B
Owing	$4500	$500
Rate	18%	18%

Which debt should you repay first?

	A	B
Owing	**$4500**	**$500**
Rate	**19%**	**17%**

Debt Repayment as a Goal

Debt A	Debt B	Debt C	Debt D	Debt E
$1000	$1000	$1000	$1000	$1000

Overarching Goal: Repay **$5000**

Subgoal: Repay **ONE** Debt (**$1000)**

How Subgoals Work

SUBGOAL

GOAL

Dispersed Strategy

Debt A	Debt B	Debt C	Debt D	Debt E
$1000	$1000	$1000	$1000	$1000

repay $500

$100	$100	$100	$100	$100
Debt A	Debt B	Debt C	Debt D	Debt E
$900	$900	$900	$900	$900

Concentrated Strategy

Debt A	Debt B	Debt C	Debt D	Debt E
$1000	$1000	$1000	$1000	$1000

repay $500

$500

Debt A	Debt B	Debt C	Debt D	Debt E
$500	$1000	$1000	$1000	$1000

Credit Card Data

- HelloWallet.com
  - Personal Finances Application
  - Client enrolls:
    - Provides access to online banking / accounts

- Measure Repayment Strategy in the real world
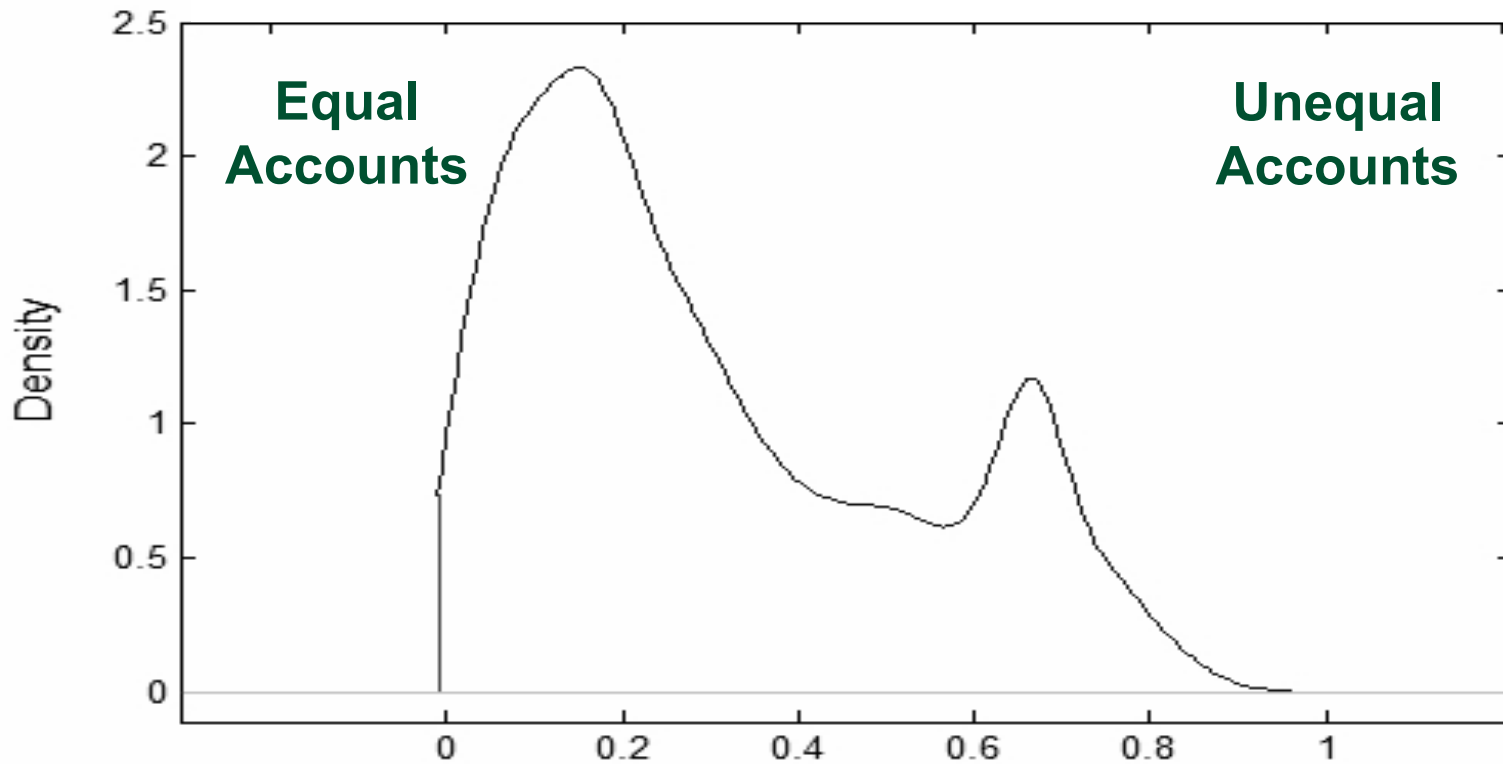- Does (Concentrated) strategy in **month t** predict greater debt repayment in **month $t + 1$**?

Measure of Strategy: $conc_{it}$

$$conc_{it} = \frac{\left(\sum_{k \in \dot{A}_{it}} \frac{(x_{ikt} - \dot{x}_{it})^2}{n_{\dot{A}_{it}} - 1} \right)}{\dot{x}_{it} \times \sum_{k \in \dot{A}_{it}} x_{ikt}}$$

- In English:
  - Normalized (between 0 and 1)
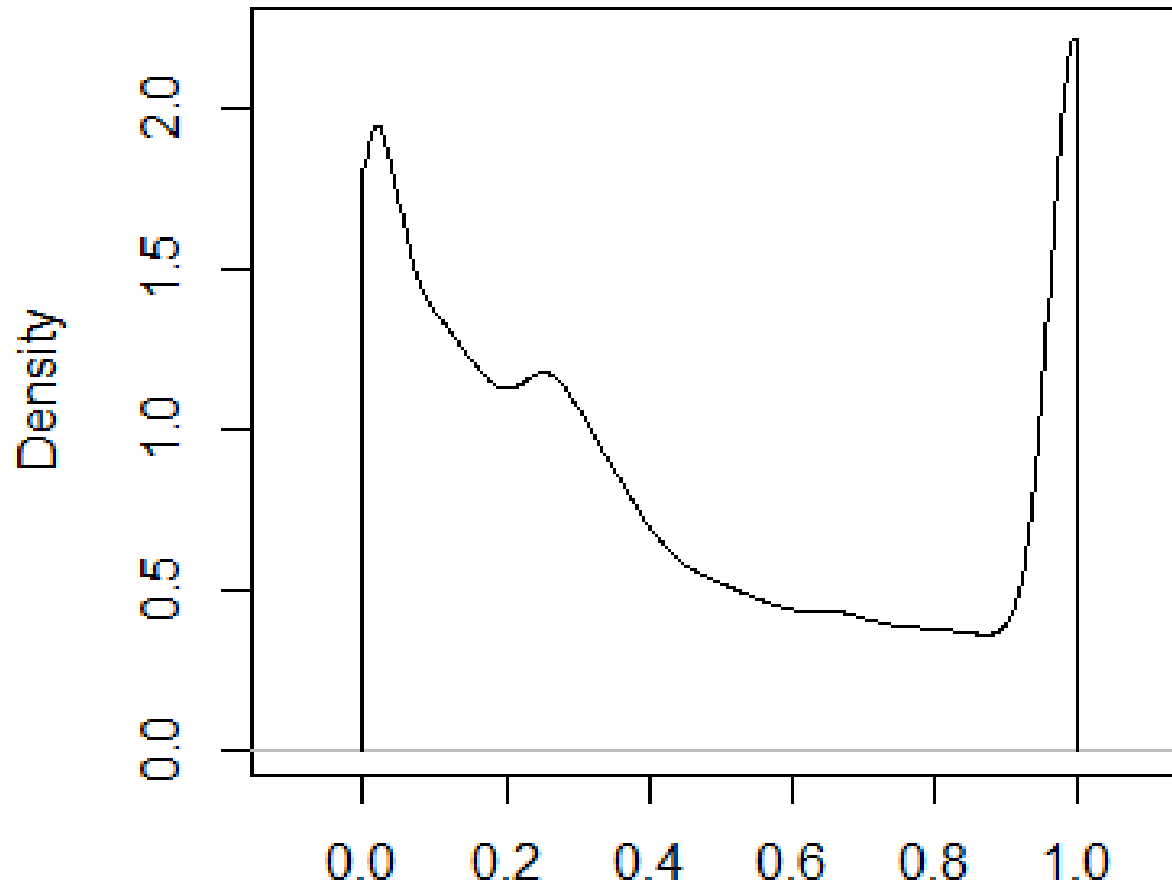 - Variance of Payments divided by Average Payment

Examples of $conc_{it}$

	A	B	Variance	Mean	Sum	$conc_{it}$

How Concentrated are Debts? ($concacc_{it}$)

What Strategy do People Use?

Dispersed   **Concentrated**

What Affects Debt Repayment $(t + 1)$?

Variable	Z-stat	Sig
$conc_{it}$	**3.75**	***
Prior repayment	**3.78**	***
$accconc_{it}$	-0.57	
Total Debt	**4.99**	***
Monthly Spending	-4.64	***
Number of cards	**-1.53**	*
Closed an account	0.37	

$* \ p < .05, ** \ p < .01, *** \ p < .001$

Use of a more Concentrated Strategy led to greater debt repayment in subsequent period.

What Explains This Effect?

FEELINGS OF PROGRESS

"How much progress do you feel you made towards repaying your debt?"

	A	B
Start	$4500	$500
Payment	$300	$0
Current	$4200	$500

3.46 / 7

	A	B
Start	$4500	$500
Payment	$0	$300
Current	$4500	$200

4.33 / 7

Greatest Rate vs Smallest Balance

Scenario 5

	A	B
Start	$4650	$350
Payment	$300	$0
Current	$4350	$350

3.33 / 7

Scenario 8

	A	B
Start	$4350	$650
Payment	$0	$300
Current	$4350	$350

4.62 / 7

Which debt should you repay first?

	A	B
Owing	**$4500**	**$500**
Rate	**19%**	**17%**

"How big is the role of motivation in debt repayment?"

Thank-You!

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Why Does This Work?

1. **Perceived Goal Progress** (Pre-Subgoal Completion)

   Kettle et al., Journal of Consumer Research, 2016

2. **Success!** (Post-Subgoal Completion)

   Gal & McShane, Journal of Marketing Research, 2012

3. **Both Pre-Subgoal & Post-Subgoal**

   Brown & Lahey, Journal of Marketing Research, 2015

4. **Debt Account Aversion**

   Scott Rick & Friends, Journal of Marketing Research, 2011

Greatest Rate of Movement

concentrated

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$1000	$0	$0	$0	$0
Current	$200	$1200	$1200	$1200	$1200

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$200	$200	$200	$200	$200
Current	$1000	$1000	$1000	$1000	$1000

dispersed

Rates of movement: 83% vs 17%

Greatest Amount of Movement

concentrated

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$1000	$0	$0	$0	$0
Current	$200	$1200	$1200	$1200	$1200

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$200	$200	$200	$200	$200
Current	$1000	$1000	$1000	$1000	$1000

dispersed

Greatest Amount of Movement

We infer just as much progress whether he paid $1000 into an account with $1200 to start with, or $20000 to start with.

Smallest Amount Remaining

concentrated

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$1000	$0	$0	$0	$0
Current	$200	$1200	$1200	$1200	$1200

	A	B	C	D	E
Start	$1200	$1200	$1200	$1200	$1200
Payment	$200	$200	$200	$200	$200
Current	$1000	$1000	$1000	$1000	$1000

dispersed

Experiment 2

- 2 x 2 x 2 Between-Subject
  - Repayment Strategy
    - **Concentrated** vs. **Dispersed**
  - Focus of Concentrated Strategy
    - **Smaller account** vs. **Larger account**
  - Amount Remaining in Each Account
    - **Equal** vs. **Unequal**

- **Note:**
  - Total starting debt and total payments are always the same.

Experiment 2: Scenario

- "Imagine that you are in debt, and that your goal is to repay all of your debts in 12 months."
  - **2 credit cards**
- "Imagine that you have repaid the following amount in the past month."
- Key DV:
  - **Choice: Deposit Check into Credit Card?**
- Mediators:
  - **Perceived progress?**
  - **How close to attaining goal?**
  - **Motivation to repay debt?**