

Displacement and product shift: empirical evidence from Oregon rivers

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1. Abstract

User satisfaction as it relates to product shift and displacement is explored in three studies, two on the Rogue River, Oregon and one on the Illinois River, Oregon. Product shift (i.e., recreationists change their definition of recreation experience in response to resource conditions) and displacement (i.e., recreationists use a different recreation site due to unsatisfactory impacts occurring at original site) are hypothesized to occur when recreationists are dissatisfied with current resource conditions. Factors influencing these phenomena are also explored. Results indicate displacement is occurring from the Rogue to the Illinois River. Significant findings and management implications are discussed.

2. Study Purpose

To test the following hypotheses:

- H1: “At the most general level, a) displacement and b) product shift are more likely than users remaining at an area and becoming dissatisfied” (p. 277)
- H2: “Displacement results from social, managerial, and environmental factors” (p. 277)
- H3: “When use increases over time, aggregate experience definitions will change toward higher density experiences” (p. 277)
- H4: “With changed experience definitions, appropriate encounter levels will increase because higher density experiences are defined in terms of norms allowing higher contact levels” (p. 277)
- H5: “Because encounter norms have changed and higher contact levels are now considered appropriate, perceived crowding (which involves negative evaluation) will not change, even though use and encounter levels have increased” (p. 277)
- H6: “Even when use and encounter levels have increased, satisfaction will remain high” (p. 277)

3. Findings

3.1. Response Rate

- 1977: 90% commercial, 74% noncommercial (interview form); 78% commercial, 83% noncommercial (mail questionnaire)

- 1979: 92% (interview form); 90% (mail questionnaire)
- 1984: 79% (mail questionnaire)

3.2. H1a – Displacement (p. 280)

- 19% of people in 1977 said they would go somewhere more remote next time – potential displacement.
- Supports H1a.

3.3. H1b – Product Shift (p. 282)

- “most favored coping strategy (34%) of 1977 Rogue floaters who saw more than expected was to change the way they thought about the Rogue, deciding it was less remote than they had believed”
- Individual level product shift, “the product is the river experience, and the shift is the redefinition in the face of conditions which may be unacceptable within the context of the user’s original expectations”
- Supports H1b.

3.4. H2 – Displacement (p. 281, Table 3)

- Five conditions Illinois floaters most often cited as applying to the Rogue:
 - ı Too many people (45%)
 - ı Use of motors on the river (45%)
 - ı Too hard to get a permit (30%)
 - ı Environment damaged by over-use (30%)
 - ı Too much competition for campsites (22%)
- Five conditions why floaters run Rogue less frequently:
 - ı Too hard to get a permit (37%)
 - ı Too many people (36%)
 - ı Use of motors (32%)
 - ı Damaged environment (24%)
 - ı Competition for campsites (19%)
- Five reasons why floaters run Illinois instead:
 - ı Too many people (36%)
 - ı Use of motors (28%)
 - ı Damaged environment (24%)
 - ı Competition for campsites (17%)
 - ı Hard to get a permit (16%)
- Supports H2.

3.5. H3 – Type of Experience (p. 282, Table 4)

- Percent of users thinking the Rogue currently “provides wilderness or semi-wilderness have decreased, while the percentage who think that it provides undeveloped recreation has increased.”
- The experience the Rogue should provide shows the wilderness category has decreased while the semi-wilderness and undeveloped have increased.
- Both support H3.

3.6. H4 – Encounter Norms (p. 282-283, Table 5)

- There was an increase in the number of acceptable encounters on the river from 1977 to 1984, though not significant. Provides limited support for H4.
- There was an increase in the number of acceptable camping encounters from 1977 to 1984. It was significant, supporting H4.

3.7. H5 – Perceived Crowding (p. 283-284, Table 6)

- Distributions of perceived crowding are not significantly different for 1977 and 1984.
- Supports H5.

3.8. H6 – Satisfaction (p. 283-284, Table 7)

- Satisfaction ratings have increased from 1977 to 1984.
- Supports H6.

4. Key Discussion Points

4.1. Displacement

- The results support the idea of displacement occurring on the Rogue River.
- The results also show that displacement is occurring from the Rogue to the Illinois.
- Main factors affecting displacement are: “social setting (too many people, competition for campsites, use of motors), managerial setting (use of motors, hard to get a permit), and resource setting (environment damaged by overuse)” (p. 284) – these results coincide with previous research.
 - Interesting note about factors NOT affecting displacement – cost, access or shuttle difficulties, weather, lack of challenge, and mandatory campsite scheduling – “suggesting that most may be willing to accept this reduction in freedom [campsite scheduling] in order to reduce competition” (p. 285)
- Illinois floaters are attracted there because of lack of “human use” problems.
- Most Illinois floaters are “willing to ‘pay a price’ to get their preferred encounter level; 88% would go during midweek, 76% would go earlier in the season when the weather is generally worse, and 79% would be willing to have less chance than they do currently to get a permit for a weekend day” (p. 285)

4.2. Product Shift

- About 1/3 people in 1977 would change way they think about the Rogue rather than go elsewhere or become dissatisfied. (p. 285)
- “River encounter norms may also be less sensitive or less important in defining the experience than camp encounter norms, as many studies suggest” (p. 285)
- Use has increased, but perceived crowding has not – product shift. (p. 285)
 - “Perceived crowding by itself is thus a poor criterion for management decisions, as has been discussed elsewhere” (p. 285)
- “Major changes in use levels and recreation experiences can occur without being reflected in satisfaction levels” (p. 286) - satisfaction poor criterion for management.

5. Management Recommendations

- In 1978, a carrying capacity limit of 120 people/day was set (not according to studies, but to “check increases in use and resulting impacts” (p. 286). Capacity studies actually suggest a lower limit, but this would be politically infeasible to lower.
- This study supports management efforts to limit use at or below the current capacity amount.
- Product shift results “support management efforts to define important characteristics of recreation experiences and then regulate use in order to keep impacts within specified standards” (p. 286).
- Management of individual areas should not be based on nationwide trends.
- Displacement and product shift can occur at all points on the Recreation Opportunity Spectrum.

6. Research Design

- 1977 Rogue study – survey research, stratified (by use level) random sample
- 1979 Illinois study – survey research, does not describe sampling design
- 1984 Rogue study – survey research, stratified random sample (includes permit holders and passengers)

6.1. Study Area

- 1977 – Wild section of Rogue
- 1984 – not specified
- 1984 – assuming Wild section of Rogue (study was done to replicate 1977 study)

6.2. Data Collection Instruments

- 1977 – one-page interview form on-site at end of trip, follow-up mail questionnaire
- 1979 – trip diary given at beginning for the trip, two-page on-site interview at end, follow-up mail questionnaire
- 1984 – mail questionnaire

6.3. Study Population

- 1977 – floaters on the Wild section of the Rogue River over a two-month period in the middle of the summer high use season; commercial and noncommercial users
- 1979 – floaters in the spring season (mid-April to early June)
- 1984 – floaters on the Rogue during high use season; noncommercial users

6.4. Sample Size

- 1977 – 249 commercial floaters; 138 noncommercial floaters
- 1979 – 236 floaters surveyed – 146 of which had run the Rogue (these respondents addressed displacement questions)
- 1984 – 466 noncommercial floaters

6.5. List of Variables and Operational Definitions

6.5.1. Displacement

- 1977 Study - “If you saw more people than you expected...you decide to go somewhere more remote next time” (p. 279)
- 1979 Study - series of questions addressing this: “Which factors do you feel apply to the Rogue? Have any of these factors caused you to run the Rogue less frequently? Did any of these factors cause you to run the Illinois instead of the Rogue?” (p. 279)
 - Factors – “logistical considerations, numbers of people and competition for resources, environmental conditions, and required skill level” (p. 279)

6.5.2. Product Shift

1977 Study - “If you saw more people than you expected...you change the way you thought about the Rogue, deciding it was less remote than you had believed” (p. 279)

6.5.3. Satisfaction

1977 and 1984 Studies - “Overall, how would you rate your trip?” – using a six-point scale from ‘poor’ to ‘perfect’ (p. 279)

6.5.4. Dissatisfaction

1977 Study - “If you saw more people than you expected...you become unhappy or dissatisfied with the trip” (p. 279)

6.5.5. Type of Experience

1977 and 1984 Studies - presented three alternatives and asked which the rogue currently provides and which it should provide:

- “Wilderness, a place generally unaffected by the presence of man” (p. 279)
- “Semi-wilderness, the kind of place where complete solitude is not expected” (p. 279)
- “Undeveloped recreation area, the kind of place where a natural setting is provided but meeting other people is part of the experience” (p. 279)

6.5.6. Encounter Norms

1977 and 1984 Studies - “The highest number [of other people respondents] would tolerate before the experience became unpleasant”

- For encounters while floating – “OK to have as many as ___ encounters per day” (p. 279)
- For nights spent camping within sight or sound of another party – “OK to be near others as many as ___ out of 5 nights” (p. 279)

6.5.7. Perceived Crowding

1977 and 1984 Studies - used nine-point scale “where users rated the experience from ‘not at all crowded’ to ‘extremely crowded’” (p. 279)

7. Theories Used in Study

Dissonance Theory – “people voluntarily select an activity and make a substantial investment of money and time may also lead to a positive evaluation of the experience”

- Relates to the idea of satisfaction – people will tend to rate their experience higher if they have put a large amount of investment in the trip.
- Because of this phenomenon “displacement may occur” (p. 275).
- The authors use this theory to explain some of the results related to satisfaction.