# Pharmacists in a liberalised system — results from a profession-wide survey in Iceland

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*Background* — The study reported here was part of a multi-study evaluation of new drug distribution legislation in Iceland.
*Objective* — The objective of this sub-study was to compare the satisfaction of community pharmacists and pharmacists in other settings with regard to their job in general, importance of the job, work hours, contact with patients, and responsibility.
*Method* — A questionnaire survey was constructed, pilot tested, and mailed to all pharmacists belonging to professional societies in Iceland in March 1999.
*Key findings* — The results show an inconsistency in whether general job satisfaction was correlated with respondents' perception of the job's importance and responsibility, more so for community pharmacists than others. Overall job satisfaction was quite high and community pharmacists felt that their contact with customers was satisfactory. However, they were more dissatisfied with their work hours, importance of their work, and responsibility than other pharmacists.
*Conclusion* — Community pharmacists have been affected more adversely by the legislative change than their colleagues in other work settings.

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THIS paper deals with the impact on pharmacy of new legislation on the distribution of drugs in Iceland that came into effect on 15 March 1996, making it the first Nordic country to liberalise its drug distribution system.[1] Under the previous system, the state determined the number of pharmacies as well as their geographic location, issued licences to pharmacists by a method analogous to designating civil servants and fixed the prices of both prescription and OTC medicines.[2,3] One of the major goals of the legislation was to lower the price of medicines by means of competition. The major changes introduced in the new legislation can be summed up as: (1) the licence to run a pharmacy is issued by the state to a licensed pharmacist only but the ownership of the pharmacy and its financial operation have no such limitations; (2) although the approval of a new licence is subject to recommendation by the municipal council, in reality there are no restrictions on the number or location of pharmacies; (3) the price of OTC products is no longer regulated by the state and the price of prescription drugs is only fixed as a maximum; (4) there is a clause making pharmaceutical care a legal requirement.[1]

A multi-study evaluation of the effects of the change in legislation was initiated in 1995. The effects of the legislation have been discussed in a series of articles.[4-10] The evaluation had three main components, with the focus on economic and epidemiological factors in drug utilisation, users of pharmacy services, and the pharmacy profession.

In the first component, interrupted time series contrasting the monthly reimbursement costs before and after the legislation and regulation took effect was used to make inferences about the impact of the legislation and regulatory changes. The study showed that the primary objective of the legislation — to lower drug costs to the state — was not achieved. Regulation to increase patients' share of drug costs, in contrast, showed some effect, albeit weak. Theoretically this was a more plausible hypothesis, as the competition between pharmacies centred on discounts for patients and not for the state. The state could not have expected to lower its costs as its share of the list price remained constant regardless of what patients were paying. The reimbursement changes were plausible economic interventions but were instituted almost as an afterthought when the discount and price wars among pharmacies escalated.[4]

Interrupted time series analysis was also used to test whether use of so-called "non-essential drugs" would increase as a result of liberalisation of pharmacy distribution. Over-the-counter (OTC) pain relievers containing codeine were used to represent "non-essential drugs." The results showed that the total use of OTC pain relievers containing codeine as well as those

containing paracetamol and codeine rose steadily throughout the period under study. The interrupted time series did not show a substantial effect from the legislative change on the use of all OTC codeine pain relievers, paracetamol with codeine, and aspirin with codeine combinations. The assumption that increased access leads to irrational use of OTC drugs was not substantiated in this case. Other reasons for possible overuse should be investigated.[5]

The second part of the evaluation focussed on users of pharmacy services. The new legislation meant that equality in the geographical distribution of drugs and drug prices was abandoned for the greater efficiency of a more liberal system.[6] Concern over these issues was voiced by participants in focus group interviews conducted in rural and urban areas of Iceland 14-19 months after the legislative change. The same focus groups discussed the quality of pharmacy services in Iceland and the findings showed this to be less important to users than the quality of other health care services.[7]

The third focus of the evaluation was on pharmacists in a more liberalised environment. It sought to answer the research question "how was the pharmacy profession affected by this legislative change?" The methods employed were focus group discussions,[8,9] in-depth interviews with key actors in pharmacy,[10] and a profession-wide survey. It is the results of the survey that are reported here. In-depth interviews were conducted to find out why the legislation was drafted and passed from the viewpoint of key actors in the pharmaceutical arena. The resulting analysis showed the reasons to be first and foremost a split profession along the lines of employers and employees, young and old pharmacists. The relative non-involvement of the profession in the legislative process can be traced back to this split.[10]

Two focus group discussions were conducted, one with rural pharmacists and one with pharmacists practising in the capital area of Reykjavík. The results showed that pharmacists had a technical orientation which prevented them from assuming the responsibilities of providing pharmaceutical care as stipulated in the new legislation. The liberalisation may in fact have had negative effects on the provision of care as pharmacists reported that they spent much more time than before on pricing and less on more pharmaceutical and patient care issues.[8,9]

Research as well as discussions within the Pharmaceutical Society of Iceland have shown concerns that the status of community pharmacy is decreasing among pharmacists and the public.[10] Pharmacy owners now openly voice frustration over the scarcity of pharmacists willing to work in pharmacies in Iceland. The University of Iceland has made efforts to recruit new students of pharmacy as the recruitment rates are reaching unacceptably low levels. This situation is not unique to Iceland, but the liberalisation of the pharmacy sector has added a new factor to the equation. It was thus of interest to study pharmacists as a profession in order to learn more about how the radical changes instituted in 1996 would affect their work. It was felt that the results of such a study could help the Pharmaceutical Society tackle the problem of apparently dwindling interest in community pharmacy. There was no previous published data on pharmacists' job satisfaction before the legislative change and so this research is a description of job satisfaction three years after the change in legislation.

**Objectives** The aim of this sub-study was to compare the satisfaction of community pharmacists and other pharmacists in Iceland with regard to: their job in general, importance of the job, work hours, contact with patients, and responsibility.

A secondary aim was to study whether general job satisfaction was consistent with the job's perceived importance and responsibility.

## Methods

A survey was constructed by the authors to cover pertinent aspects of present job satisfaction, comparing it to the years around the change in legislation. Three subscales were used from Spector's Job Satisfaction Survey (JSS) to measure the aspects of wages, operating conditions, and nature of work.[11] Each subscale included four items. Items from eight dimensions on the Job Satisfaction Index of the Swedish Pharmacies (Apoteket AB) were also included in the survey. These dimensions had to do with job content, knowledge, variety, work hours, stress, wages, responsibility, and general job satisfaction.[12] Other questions were constructed by the authors to gauge the effects of the legislative change on job satisfaction of pharmacists (see Panel for survey questions analysed in this article).

The implied "brain drain" from community pharmacy, as voiced by many in pharmacy circles, was researched using a rudimentary measure of how much emphasis pharmacists put on the importance of their job in relation to overall job satisfaction and responsibility, comparing community pharmacists with pharmacists in other work environments less affected by the legislative change.

The questionnaire included 77 questions, most with closed answer categories.

As this was a profession-wide survey intended for a population of less than 300 it was decided to pilot test it with six members of the executive committee of the Pharmaceutical Union (SÍL). After revision the survey was sent out in March 1999 to all pharmacists registered in the national pharmaceutical associations (LFÍ and SÍL). The sample included 294 pharmacists active in the job market at the time of the survey. At the

Panel 1: Questions used to gauge pharmacists' job satisfaction

Q17 I always know what assignments my job entails.
Q18 I always know what is expected of me at work.
Q19 I always know what responsibility I have towards the workplace.
Q27 I have influence on the decisions made at my work place.
Q28 I feel responsible with my co-workers for how the work place is doing.
Q29 I feel responsible with my co-workers for the policies of the work place.
Q30 I feel responsible for reaching the goals set by the work place.

1 Strongly agree
2 Agree
3 No opinion
4 Disagree
5 Strongly disagree

Q34 In general how satisfied or dissatisfied are you with your job (job content, co-workers, supervisor, boss, salary, etc)?
1 Very satisfied
2 Satisfied
3 No opinion
4 Dissatisfied
5 Very dissatisfied

Q35 Think about your expectations towards your job and its contents. How close are you to fulfilling these expectations in your current job?

Q36 Think about a job that is as good as it gets (job content, co-workers, supervisor, boss, salary, etc.) How close or far away are you from this ideal job in your current job?
1 Very close
2 Rather close
3 Neither close nor far away
4 Rather far away
5 Very far away

Q46 Are you satisfied or dissatisfied with current work hours?
1 Very satisfied
2 Somewhat satisfied
3 Neither satisfied nor dissatisfied
4 Somewhat dissatisfied
5 Very dissatisfied

Q59 How would you rate your job satisfaction on a scale ranging from 0 to 10, where 0 means you are extremely dissatisfied and 10 that you are extremely satisfied? (Please circle the number you feel is most appropriate for your situation): 0 through 10

Q61 How has your attitude towards your job changed during the years 1993 though 1999?
1 I am much more satisfied
2 I am more satisfied
3 I am more dissatisfied
4 I am much more dissatisfied

Q62 How much or little influence did the new drug distribution legislation have on your attitude towards your job?
1 Very large influence
2 Fairly large influence
3 Fairly little influence
4 Very little influence
5 No influence

Q63 How satisfied or dissatisfied are you with your relations with patients or other medicine users?
1 Very satisfied
2 Somewhat satisfied
3 Neither satisfied nor dissatisfied
4 Somewhat dissatisfied
5 Very dissatisfied

time of this study the Pharmaceutical Society of Iceland was divided into two associations: one professional society (LFÍ) and a union (SÍL) which handled questions of employee rights. All registered pharmacists who were employed had to be members of SÍL. Membership of LFÍ was not mandatory, but most self-employed pharmacists or pharmacy owners were members of this society as well as most SÍL members. By merging the two lists with their frequent overlaps and excluding retired pharmacists it was possible to reach practically all pharmacists in Iceland who were working at the time.

Those who had not replied were reminded once by mail approximately one month after the initial mailing and once by telephone approximately two months after the initial mailing.

Responses were analysed by classifying pharmacists into community and other settings (hospital, wholesale, manufacturing, government, academia, and "other"). The latter group is referred to as "other pharmacists" in the remainder of the paper. Responses were grouped and tested using $\chi^2$ statistics in SPSS version 8.

Consistency of answers regarding general job satisfaction and job importance/responsibility was described by counting those who were satisfied with their job's importance and also reported high job satisfaction and responsibility in the work place. Consistency was thus defined as the pharmacist's agreement regarding his or her perception of the job's meaning or importance and factors found to be positively related to this concept (ie, general job satisfaction and feeling responsibility and authority in the work place).

## Results

**Response rate** The overall response rate was 138 out of 294 (46.9 per cent). The rate was 40 per cent (52 out of 130) for community pharmacists and 46 per cent (76 out of 164) for other pharmacists. Ten respondents did not provide answers regarding their work place. Due to privacy issues only the following demographic information was included in the survey: highest degree earned (Bachelor, Masters, or other), job position, time since graduation from pharmacy

**Table 1: Demographic information on pharmacists participating in the survey***

| Variable | | Community pharmacists (n=52) | Per cent | Other pharmacists† (n=75/76) | Per cent | Total (n=127/128) | Per cent |
|---|---|---|---|---|---|---|---|
| Highest academic degree | Bachelor | 9 | 17.3 | 6 | 8.0 | 15 | 11.8 |
| | Masters | 43 | 82.7 | 64 | 85.3 | 107 | 84.3 |
| | Other | 0 | 0.0 | 5 | 6.7 | 5 | 3.9 |
| Time since graduation from pharmacy school | 0-5 years | 9 | 17.3 | 20 | 26.7 | 29 | 22.8 |
| | 6-10 years | 12 | 23.1 | 21 | 28.0 | 33 | 26.0 |
| | 11-15 years | 11 | 21.1 | 10 | 13.3 | 21 | 16.5 |
| | 16 or more years | 20 | 38.5 | 24 | 32.0 | 44 | 34.6 |
| Sex | Women | 37 | 71.1 | 47 | 62.7 | 84 | 66.1 |
| Association affiliation | SÍL (union) | 43 | 82.7 | 71 | 93.4 | 114 | 89.1 |
| | Association of owners | 4 | 7.7 | 0 | 0.0 | 4 | 3.1 |
| | No union | 3 | 5.8 | 3 | 3.9 | 6 | 4.7 |
| | Other unions | 2 | 3.8 | 2 | 2.6 | 4 | 3.1 |
| Work place (only reported for "other pharmacists") | Manufacturer | - | - | 18 | 23.7 | - | - |
| | Wholesaler | - | - | 21 | 27.6 | - | - |
| | Hospital | - | - | 16 | 21.0 | - | - |
| | Civil servant | - | - | 8 | 10.5 | - | - |
| | Academia | - | - | 11 | 14.5 | - | - |
| | Other | - | - | 2 | 2.6 | - | - |

*Information on 10 pharmacists who did not report type of work place was excluded
† One pharmacist did not answer all questions

school, sex, type of work place, and association affiliation. The demographic information is shown in Table 1.

**Job satisfaction** A higher percentage of community pharmacists than other pharmacists reported that they had become less satisfied with their job during 1993-1999 (Q61). Of those who reported a change, 58 per cent were less satisfied compared with 14 per cent of all other pharmacists ($P<0.05$). Not surprisingly, the legislation liberalising community pharmacy ownership was found to have had more effect on community pharmacists than other pharmacists. Sixty-eight per cent of the community pharmacists reported that the legal changes had a fairly or very large effect for them, compared with 17 per cent of other pharmacists (Q62).

In contrast to these findings, there was no statistically significant difference between the two groups regarding self-reported current overall job satisfaction. One question asked the pharmacists to rate job satisfaction on a scale from 0 to 10 (Q59). Few (15 per cent of community pharmacists and 12 per cent of other pharmacists) rated themselves between 0 and 5. Most were in the 6-8 range (63 per cent for both categories of pharmacists). In the high range (score 9-10) there was a higher share of other pharmacists (19 per cent versus 25 per cent) but a $\chi^2$ test showed no statistically significant difference.

**Job importance** Responses to the statement: "Sometimes I feel that my job is rather meaningless" were recoded from a 5-point Likert scale using three categories (agree or strongly agree, no opinion, and disagree or strongly disagree). No statistically significant difference was found between community and other pharmacists, although numerically it was possible to detect a slight difference. Of the community pharmacists, 63 per cent disagreed with the statement compared with 77 per cent of other pharmacists and 31 per cent versus 14 per cent agreed.

Job importance and job satisfaction were compared to determine the consistency of answers between these two factors. The statement "Sometimes I feel that my job is rather meaningless" was compared with three separate statements regarding general job satisfaction (Q34-36). The consistency between these answers is shown in Table 2. A larger proportion of community pharmacists reported feeling that their job was meaningless but were still rather satisfied with their job and conversely felt that their job had meaning even if they were not generally satisfied.

Job importance and job responsibility were also compared regarding the consistency of answers between these two factors. Two types of responsibility statements were compared: first, statements regarding knowledge about responsibilities (Q17-19) and, secondly, perceived influence or authority (Q27-30). The results are shown in Table 2. The hypothesised relationship between importance and responsibility is not supported by this data. Community pharmacists were again lower than other pharmacists in terms of the consistency of their answers, ie, they were more likely than others to feel their job had meaning without having responsibility and they more often felt their job was meaningless even if they had responsibility.

**Work hours** Opening hours have increased substantially since the legislative change came into effect in 1996. According to a question about general satisfaction with work hours (Q46), 87

**Table 2: Consistency between general job satisfaction/responsibility and perceived job importance for community pharmacists and other pharmacists**

| Statements compared with *"Sometimes I feel that my job is rather meaningless"* representing the concept of Perceived job importance | Community pharmacists | | Other pharmacists | |
|---|---|---|---|---|
| | Number of consistent responses (total N*) | Consistency %† | Number of consistent responses (total N*) | Consistency %† |
| *General job satisfaction compared with Perceived job importance* | | | | |
| 34. In general how satisfied or dissatisfied are you with your job (job content, co-workers, supervisor, boss, salary, etc)? | 28 (52) | 54 | 55 (73) | 75 |
| 35. Think about your expectations towards your job and its contents How close are you to fulfilling these expectations in your current job? | 25 (52) | 48 | 48 (74) | 65 |
| 36. Think about a job that is as good as it gets (job content, co-workers, supervisor, boss, salary, etc.) How close or far away are you from this ideal job in your current job? | 23 (52) | 44 | 41 (74) | 55 |
| *Knowledge about responsibilities compared with Perceived job importance* | | | | |
| 17. I always know what assignments my job entails | 26 (52) | 50 | 50 (72) | 69 |
| 18. I always know what is expected of me at work | 27 (52) | 52 | 48 (74) | 65 |
| 19. I always know what responsibility I have towards the workplace | 32 (52) | 62 | 53 (74) | 72 |
| *Influence or authority compared with Perceived job importance* | | | | |
| 27. I have influence on the decisions made at my work place | 30 (52) | 58 | 54 (74) | 73 |
| 28. I feel responsible with my co-workers for how the work place is doing | 31 (52) | 60 | 58 (74) | 78 |
| 29. I feel responsible with my co-workers for the policies of the work place | 29 (52) | 56 | 44 (74) | 60 |
| 30. I feel responsible for reaching the goals set by the work place | 31 (52) | 60 | 55 (74) | 74 |

* Number of responses to both statements compared

† Consistency was calculated as the proportion of pharmacists who both reported being satisfied with their job's importance and reported high job general satisfaction and responsibility in the work place

per cent of other pharmacists were satisfied compared with 53 per cent of community pharmacists ($P$=0.0001). With regard to the distribution of work hours over the week, the difference was less but still statistically significant (59 per cent versus 83 per cent satisfied, $P$=0.01).

**Contact with patients/customers** When asked (Q63) about satisfaction with contact with patients and other users of medicines, 67 per cent of other pharmacists did not have any contact with either group whereas all community pharmacists had contact. The community pharmacists divided into 73 per cent "very satisfied" or "somewhat satisfied" with their contact with patients and 17 per cent "somewhat dissatisfied." Fifteen out of 24 (63 per cent) other pharmacists were "very satisfied" or "somewhat satisfied" and two out of 24 (8 per cent) were "somewhat dissatisfied." No pharmacists reported being "very dissatisfied" with their contact with patients or customers. A $\chi^2$-test was not pertinent as there were too few cases for some of the cells.

Those who were dissatisfied were asked to explain and the following answers were provided: (1) Lack of time (26 out of 35 community pharmacists and 12 out of 16 other pharmacists); (2) competition for customers (17/35 community pharmacists and 3/16 other pharmacists); (3) not enough training to deal with customers (4/35 versus 1/16); (4) other explanations (8/35 versus 2/16).

Among explanations grouped under "other" were: Lack of ambition, focus on fiscal issues, lack of continuing education, work pressures, lack of knowledge about how one should communicate with patients.

## Discussion

This profession-wide survey had a surprisingly low response rate from community pharmacists despite two reminders. Even if the 10 pharmacists who did not provide information about their workplace were all community pharmacists, it would still not push the response rate to over half the pharmacists practising in outpatient settings at the time of the survey. Low response rates are not unusual in this type of study. For example, a survey of teachers in Australia showed a response rate of 49 per cent.[13] In a survey carried out on British general practitioners, the authors had a response rate of 45 per cent.[14] Although authors of both articles considered these response rates low, the results were still considered worth reporting. Another study by the authors of the latter article comparing telephone and postal surveys of GPs showed that non-response was related to lack of activity in the area under study.[15] However, this could not be said to be the case in the current study where job satisfaction relates to all pharmacists. The low response rate means it is not possible to rule out bias in the findings.

Despite the low response rate we find the results noteworthy. First, the low response rate — although not easily explained — pointed to certain characteristics of Icelandic community pharmacy. Secondly, the results regarding the inconsistency in the answers were felt to be important for the further study of the profession.

Various explanations for our relatively low response rate can be found. The first explanation is obvious for those who have monitored the changes in community pharmacy since the legis-

lation came into effect in 1996. Community pharmacists have an increased workload. As a result of the competition, each pharmacy has become a smaller unit with fewer pharmacists, longer opening hours, and the price war has put more pressure on pharmacists to work with patients on discounts.[8-10] In addition there is a great shortage of pharmacists in Iceland.[16] Another pattern is the increasing number of part-time pharmacists. These pharmacists are either very young and still unsure about their career path or older and on the way to retirement. This may influence the propensity to answer a questionnaire tailored towards professionals who have witnessed the change in legislation and are interested in reporting on this change.

One pharmacist who received a second reminder reported dissatisfaction with the results of another study done by a member of the research team regarding the costs of pharmaceuticals[4] (results which were unfavourable toward the legislative change). It is plausible that similar dissatisfaction may have averted some supporters of the legislation change from answering the survey.

As the response rate was relatively low, any group differences that might have biased the results were considered. The response rate was higher among younger pharmacists, and higher among women. Younger pharmacists have less experience of the environment before the legislative change in 1996.

The population of pharmacists surveyed included both employee pharmacists and pharmacists who either owned a pharmacy or were licence holders. Licence holders are pharmacists who have been granted authority over a pharmacy concerning professional matters. After the legislative change, responsibility for fiscal and professional matters in community pharmacy has been separated in many pharmacies, especially those belonging to one of the chains. It was not possible to discern whether community pharmacists were licence holders or regular employees without management responsibilities. It is therefore unknown whether there was differential response from these two groups.

The number of pharmacies and opening hours has increased dramatically in Iceland since the liberalisation. There was a 60 per cent increase in the number of pharmacies in the Reykjavík area. Many pharmacies in Reykjavík are open past the conventional closing time of 6pm. Community pharmacists also have to work many Saturdays. It is therefore unsurprising to observe lower satisfaction among community pharmacists with their working hours, although this issue did not surface in the focus group discussions. This discrepancy may be explained by the time lag between the two studies. The focus groups with pharmacists were conducted shortly after the legislative change (autumn of 1997) whereas the number of pharmacies and opening hours kept on increasing after the focus groups and a certain fatigue may have started to settle in among community pharmacists.

Community pharmacists were more likely than other pharmacists to find their work rather meaningless. This was substantiated by the focus group discussions with community pharmacists and explained by their using time to discuss prices rather than pharmaceutical care in a related study.[8,9] However, despite sometimes feeling their job is meaningless, most pharmacists scored highly on job satisfaction. Researchers in the humanistic and social sciences in Iceland have found that Icelanders score highly on questions regarding satisfaction with life in general in comparison with other nations.[17] The social expectation to be "happy" may therefore have pushed the reported job satisfaction upwards for this population.

Community pharmacists seem to be satisfied with their interactions with patients, but many do not consider their work meaningful or important. As was found in the focus groups, pharmacists seem to be technically focused and patient care does not seem to be important to them professionally. Studies of community pharmacists have also shown them to be divided between the image of a health professional and a business orientation.[18] This might explain the apparent inconsistency. Pharmacists may not emphasise patient contact when considering the overall meaning or importance of their job. It is even plausible that since they have a technical orientation they find that a pharmacy that runs well organisationally and technically is much more important to their job satisfaction.

It may also be true that pharmacists have good interactions with patients. Interactions can be on friendly terms and therefore satisfactory, but they may be less pertinent for pharmaceutical care. Further studies should therefore include direct questions on the importance of patient care to community pharmacists.

Another study divided the role perceptions into four main ideal types: technical, business, conforming and holistic.[19] The conforming perception is especially interesting with respect to the results of this study as it may account for some of the reported inconsistency and lack of difference between community and other pharmacists. The conforming ideal type puts personal relations within the work place above other work-related concerns. They feel that work is not as important as their private lives. This characteristic may explain the fact that community pharmacists do not significantly differ from other pharmacists regarding overall job satisfaction, job content satisfaction, and satisfaction with customer contact.

Another interesting ideal type is the business perception. This type feels that it is his or her role to provide a commodity (product) for a need (disease). Work should be remunerative and cus-

tomer relations are good if products are sold. This ideal type does not account very well for the observed inconsistency, but may partly explain the high reported general job satisfaction. Community pharmacists may be predominantly of these two ideal types as a response to an environment of increased competition on prices.

## Conclusion

Despite a relatively low response rate we conclude cautiously that community pharmacists in Iceland have become less satisfied compared with their colleagues in other work settings after the legislative change. Not surprisingly, they also feel the impact of the legislation more than other pharmacists in Iceland. Overall, there was a high self-reported job satisfaction within both groups of pharmacists. No statistically significant differences were found between the groups regarding perceived job importance and satisfaction with customer contact whereas satisfaction with work hours was significantly lower for community pharmacists. Intriguing inconsistencies were found in community pharmacists' answers regarding general job satisfaction/responsibility and perceived job importance in that they seemed to find their job rather meaningless and at the same time felt their job and attached responsibility was satisfactory.

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