



Teaching motivations in Hong Kong: Who will choose teaching as a fallback career in a stringent job market?



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HIGHLIGHTS

- Teaching motivations in Hong Kong are similar to other countries.
- Two types of fallback career motivation are identified.
- Only one type of fallback career motivation has maladaptive correlates.
- Altruistic and intrinsic motivations reduce negativity of fallback career motivation.

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ABSTRACT

This study investigated whether teaching motivations and their outcomes in Hong Kong with a teacher surplus are similar to countries with teacher shortage. Results from 132 pre-service teachers showed altruistic and intrinsic motivations were the most important teaching motivations and they correlated positively with planned teaching engagement. Unlike other studies, two types of fallback career motivation were identified, but only one correlated negatively with planned engagement. Analysis of interview data revealed that the maladaptive effects of fallback career motivation could be reduced by altruistic and intrinsic subject matter motivations. The heuristic value to examine the complete motivation profile was discussed.

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1. Introduction

Many countries around the world are facing a shortage of teachers. The UN has cautioned about an acute shortage of primary school teachers, especially in sub-Saharan African countries that may challenge global efforts to provide universal primary education by 2015 (Provost, 2011). North America and Western Europe in general face the same problem, though to a lesser extent. The OECD (Organisation for Economic Co-operation and Development, 2005), for example, has noted this problem in all OECD countries. While about 60% of the 159 countries surveyed by Provost (2011) worried about the lack of qualified teachers, the rest had more teachers than they needed. Among these countries with a teacher deficit, e.g. El

Salvador, Mexico, Germany, China, and Indonesia, Hong Kong has one of the highest negative average annual changes. With the decreasing number of enrollments in primary schools (493,075 in 2001 vs. 331,112 in 2010) and secondary schools (456,455 in 2001 vs. 449,731 in 2011) except in matriculation classes (Census and Statistics Department, Hong Kong Special Administrative Region, 2012), demand for teachers has reduced. Very recently, the Hong Kong Professional Teachers' Union warned that more than 800 contract teachers and teaching assistants will lose their jobs when the government cuts special grants to schools and "it will be hard for teacher-trainees to find jobs and the situation will persist for several more years" (Siu, 2013, para. 3). For those who are entering the teaching profession, a stringent job market with a decreasing number of vacancies is waiting for them. What, then, motivates people to become teachers?

Most studies on teaching motivation are conducted in countries with a teacher shortage, e.g. the US (Lin, Shi, Wang, Zhang, & Hui, 2012; Thomson, Turner, & Nietfeld, 2012), Australia (Sinclair,

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Dowson, & McInerney, 2006; Watt & Richardson, 2007); the Netherlands (Fokkens-Bruinsma & Canrinus, 2012b), Norway (Roness, 2011), and Belgium (Cooman et al., 2007). Little is known about teaching motivation in the context of teacher surplus. Findings from the current study will help to fill this knowledge gap.

1.1. Motivations for teaching

Motivation “is the process whereby goal-directed activity is instigated and sustained” (Schunk, Pintrich, & Meece, 2008, p.4). It helps to determine whether individuals would initiate and persist in an activity and the extent of their engagement in it. In terms of teacher education, understanding the motivation to teach may shed light on who will enter the teaching profession, stay in it and the way they go about their teaching (Müller, Alliaata, & Benninghoff, 2009).

Many studies have been conducted to examine the motivations for teaching. They have moved beyond the search for isolated factual reasons to the conceptual analysis of underlying motivational themes that affect the career choice of teachers and teacher aspirants (Ferrell & Daniel, 1993). One of the most common ways to classify teaching motivations is to group them into intrinsic, extrinsic and altruistic motives (e.g., Chan, 2006; Kyriacou, Hultgren, & Stephens, 1999; Roness, 2011; Sinclair et al., 2006; Thomson et al., 2012; Williams & Forgasz, 2009). Intrinsically motivated individuals do something “for its inherent satisfaction rather than some separable consequences” (Deci & Ryan, 2000, p.56). They choose teaching for reasons related to the teaching activity itself (e.g., being challenging and creative, passing on knowledge) and to individual beliefs and values (e.g., personal interest in teaching, enjoying working with children). To choose teaching due to strong interest in the subject taught (Berger & D’Ascoli, 2012), named subject-matter motivation by Roness (2011), also falls into this type of motivation. When individuals are more interested in outcomes separable from teaching itself, e.g. its income, prestige and long holidays, they are considered extrinsically motivated (Kyriacou et al., 1999; Williams & Forgasz, 2009). Furthermore, some are attracted to teaching because of their altruistic desire to help children develop and to contribute to larger social causes such as fair education and social equality (Chan, 2006).

A more recent framework that assesses teaching motivation is the FIT-Choice (Factors Influencing Teaching Choice) model (Watt & Richardson, 2007) which measures both the teaching motivations and perceptions of the teaching profession. With reference to the teaching motivations, in addition to the motivations described above, this model also includes social influences, prior teaching and learning experiences, perceived teaching competence and the negative motivation of choosing teaching as a fallback career.

Of particular interest among the various reasons to undertake teaching is its consideration as a fallback career. Whereas the other postulated teaching motivations imply that teaching is a career of choice and individuals are happy to become teachers, a fallback career points to the possibility that teaching could be a non-choice – a lesser evil or a last resort for individuals to fall back on when more desirable career options cannot be attained (Klassen, Al-Dhafri, Hannok, & Bettles, 2011; Watt & Richardson, 2012) or a choice by default when teaching is the main objective of their studies (Müller et al., 2009). Easy entry into teaching and dissatisfaction with previous employment may prompt people who do not really want to teach to become teachers (Sinclair et al., 2006).

Among the reasons that explain the choice of teaching, altruistic or social utility motivations have often been chosen as the most important motivations (e.g., Cooman et al., 2007; Kilinc, Watt, & Richardson, 2012; König & Rothland, 2012; Lin et al., 2012; Müller et al., 2009; Thomson et al., 2012). Sometimes teachers’ beliefs in their teaching ability (Fokkens-Bruinsma &

Canrinus, 2012b; Klassen et al., 2011) and subject-matter motivation (Kyriacou et al., 1999; Roness, 2011) emerge as the most significant teaching motivations. Intrinsic and extrinsic motivations are usually ranked in the middle. In studies that have included a fallback career as a possible teaching motivation, it has always been the least endorsed motivation (Fokkens-Bruinsma & Canrinus, 2012b; Lin et al., 2012).

1.2. Teaching-related outcomes for different teaching motivations

Teaching motivation is important because it is relevant to the recruitment and retention of teachers. More importantly, the reason why individuals want to teach may lead to different consequences. Sinclair et al. (2006) argued that motivations are not necessarily adaptive. They differ in “the extent to which they promote lasting and effective engagement in a task or activity” (p.1138). Those that facilitate deeper and longer engagement are adaptive, whereas those associated with disengagement or superficial involvement in an activity are maladaptive. They assume that a fallback career motivation is maladaptive, but did not examine this in their study.

As far as our literature search shows, the differentiation into adaptive and maladaptive motivations is quite new in the study of teaching motivations. Few systematic investigations of adaptive and maladaptive teaching motivations have been conducted. A recent one is the study by Fokkens-Bruinsma and Canrinus (2012a). They related motivations derived from the FIT-Choice scale with the outcome variables of intended effort, planned involvement and current professional commitment (affective, continuance and normative commitment¹) to the teaching profession. Perceived ability to teach and intrinsic career value are consistently positively related to all outcome variables, while altruistic motivations and extrinsic motivations showed positive relationships to some outcomes. Positive correlations between intrinsic/altruistic motivations and commitment in teaching were also found by Chan (2006), but extrinsic motivation is negatively correlated with commitment. The consistent positive consequences associated with perceived competence in teaching, intrinsic and altruistic motivations qualified them to be adaptive teaching motivations.

A fallback career is generally regarded as a maladaptive teaching motivation due to its outcomes. König and Rothland (2012) reported that those who chose teaching as a fallback career were less intrinsically motivated and less keen to achieve altruistic goals through teaching than those for whom teaching was their first choice, and these were taken as indicators of a “lack of professional ethos” (p.301). Its negative relationship with effort, involvement and affective commitment made it a clear case of maladaptive motivation (Fokkens-Bruinsma & Canrinus, 2012a), but it was positively correlated with continuance and normative commitment. Fokkens-Bruinsma and Canrinus (2012a) found these results “counter-intuitive” (p.16) and, to make sense of the baffling results, conjectured that “these results might point in the direction of normative commitment not being beneficial to the profession” (p.17).

The above analysis shows that perceived teaching competence, intrinsic and altruistic motivation are clearly adaptive teaching motivations. The motivational consequences of extrinsic and fallback career motivation are less definite. A deeper understanding of

¹ The three types of commitment are based on the three-component model of professional commitment by Meyer, Allen, and Smith (1993). They explained that “[e]mployees with a strong affective commitment remain with the organization because they want to, those with a strong continuance commitment remain because they need to, and those with a strong normative commitment remain because they feel they ought to do so” (p.539).

this can be gained by examining teaching-related outcomes in terms of planned engagement in future teaching of pre-service teachers in a society characterized by a teacher surplus.

1.3. Teaching motivations in Hong Kong

The extensive search by the authors showed that there are limited studies on the motivation to choose teaching in Hong Kong. In an earlier study with non-graduate pre-service student teachers, Chan (1998) found that extrinsic reasons were their most influential motivations for enrolling in a teacher education programme. In-service teachers gave intrinsic/altruistic motivations and extrinsic incentives as the two most influential reasons for choosing teaching (Chan, 2006). In a recent study by Lam (2012), the analysis of interview data of postgraduate pre-service teacher education students generated two major reasons for their choice to be teachers, namely teaching as a safe haven and internal satisfaction. The interviewees perceived teaching as a safe haven because it offered a higher salary, better job security, more holidays, a more collegial working environment and simpler interpersonal relationships than other professions. Their altruistic aspiration to make a difference in students' lives and interest in working with children brought them inner satisfaction. Similarly, undergraduate teacher education students from Hong Kong and Mainland China have cited altruistic, intrinsic and extrinsic reasons as their main motivations for teaching in another study (Gu & Lai, 2012).

It can be observed from these studies that extrinsic motivation is a significant pull factor that attracts individuals in Hong Kong to join teaching. This is readily understandable in view of the high starting salary of qualified teachers, which was around HK\$24,000 (about US\$3000) in 2010–11. This was only lower than those with a medical degree, and was in the 75th percentile of the monthly income of the local working population (Census and Statistics Department, Hong Kong Special Administrative Region, 2012). Not only is the salary of teachers relatively high, but annual increments for those teaching in government and government-aided schools are guaranteed as their salary is linked to the Master Pay Scale of civil servants.

The high starting salary of teachers has its downsides. It may promote fallback career motivation in individuals who do not initially intend to teach. In Taiwan, where a teacher surplus has also been registered, Wang and Fwu (2002) have noted a group of teachers whom they labeled the uncommitted. They were not enthusiastic about teaching, but were primarily attracted by the external incentives of teaching, including its high salary, which earns teaching the label of “iron-bowl” (Chung & Hwang, 2012). The high entry salary was postulated by König and Rothland (2012) as one of the nurturing conditions that makes teaching a fallback career. Another condition is low entry selection into the teacher profession. The requirement to become teachers is minimal in Hong Kong. Graduates from post-secondary institutes and universities can become teachers without teacher training. Obtaining the professional teacher qualification brings the bonus of a 2-point increment to their salary and is a pre-requisite for promotion. If it is easy to enter teaching and the salary is attractive, teaching will become appealing even to people who are not interested in teaching.

While a high salary at job entry can act as a strong motivator to attract people to enter teaching, this does not rule out other motivations that teacher aspirants have in their career choice. Notwithstanding the financial incentive, the teaching profession in Hong Kong is plagued with problems. The many educational reforms that have been introduced since Hong Kong became a Special Administrative Region of China in 1997 have involved all aspects of school education (Tang, 2011). Teachers' workload has increased tremendously as exemplified by the increase in working hours from

about 50 h per week in 2006 (The Committee on Teachers' Work, 2006) to more than 61 h per week for over half of the teachers surveyed by Lai and Law in 2010. The diminishing school enrollment which led to the downsizing and closure of “under-performing” schools has added more pressure to teachers. Unfortunately their hard work was not recognized by the government. Instead, government officials took the lead in criticizing teachers' competence, and introduced mandatory qualification examinations to spur on educational reforms (Morris, 2004). Teacher suicides have unfortunately made newspaper headlines and the mental health of teachers has become a public concern. In the face of these demanding and stressful work conditions, those who enter teaching would not be motivated solely by the good salary, but by multiple reasons. In this regard, it is particularly revealing to examine fallback career motivation. The taxing working conditions and competitive job market do not seem to be compatible with the wish to have an easy job to fall back on. By providing teachers with the opportunity to voice their views more freely in an interview, insights could be gained to make sense of the apparent contradiction experienced by those motivated by fallback career motivation and to throw light on the “counter-intuitive” teaching-related outcomes of these teachers that puzzled Fokkens-Bruinsma and Canrinus (2012a, p.16).

The current study aims at examining the factors that motivate teacher education students to choose teaching as a career in Hong Kong by adopting both quantitative and qualitative methods. Past studies have provided some data on this important question, but the further development in this area that has taken place since Chan's studies (1998, 2006), e.g. the introduction of new models and findings from numerous empirical studies, and the changes in the working conditions and job market for teachers, warrant an updated systematic investigation of this important question. The interview of 38 and 20 pre-service teachers by Lam (2012) and Gu and Lai (2012) respectively, while giving an in-depth picture of students' views, falls short of capturing the multitude of motivators identified in the literature. It is hoped that the development of a new questionnaire that incorporated the large range of possible motivating factors and the subsequent interview that probed into the motivational pattern uncovered in the questionnaire would pave the way for a more comprehensive understanding of teaching motivation at a time when teacher redundancy has become a problem in Hong Kong.

To sum up, this study aimed to address the following research questions:

1. What motivates pre-service teachers to become teachers in Hong Kong?
2. How do different teaching motivations relate to teaching-related outcomes in terms of planned engagement in future teaching?
 - Under the second research question, special attention is given to fallback career motivation.

2. Method

Both quantitative and qualitative methods were adopted in this study to provide a broad and in-depth understanding of teaching motivation of pre-service teachers in Hong Kong. In the quantitative part of the study, student teachers completed a newly developed questionnaire. They were invited in the questionnaire to participate in a follow-up individual interview, each of which took about 1.5 h. Based on the findings of the questionnaire, interview questions were set to explore what had motivated them to become teachers and their planned engagement in future teaching. Among the seven interviewees, three stated that the motivation “Fallback

career: Teaching as a provisional, non-committed option" was relevant to their decision to become teachers. For the purpose of this article, we shall focus the analysis on these three interviewees.

2.1. Participants

A total of 132 pre-service teachers who had just completed their Postgraduate Diploma in Education (PGDE) Programme, which prepares university graduates to become professional teachers, participated in the quantitative study. This means a response rate of 93% from a total of 142 in the cohort. Of the respondents, seven joined the interviews voluntarily. The demographic characteristics of the whole sample, the seven interviewees and the three interviewees whose responses are analyzed in detail in Section 3.3 are presented in Table 1. The interviewees are generally similar to the whole sample except that they are older and have more teaching-related experience.

2.2. Instruments

As this study does not aim to validate any theory but to explore the motivation to become teachers in a context characterized by an over-supply of teachers, with special attention given to teaching as a fallback career, a trans-theoretical approach that draws upon various theories and research was used (Sinclair, 2008) to develop the questionnaire. Based on the rich array of teaching motivations that have already been identified in the literature and our observation of what some student teachers put forward as their reason to enter teaching, especially those related to a fallback career, a list of teaching motivations was compiled. After the initial questionnaire was developed, four final-year education students were invited to complete it, and their feedback was incorporated to polish the wording and clarify ambiguous content. The final questionnaire comprised 51 questions that measure teaching motivation. Students indicated their response on a six-point Likert-type scale ranging from 1 (*very unimportant*) to 6 (*very important*). Teaching-related outcomes were measured by two questions that were adopted from Watt and Richardson (2007) that ask about their planned length of staying in the teaching profession and the effort they intended to exert in teaching. Their response on the six-point Likert-type scale (1 = *very untrue* to 6 = *very true*) indicated their planned commitment to their future teaching.

Guided by the analysis of the questionnaire data, the interview questions were designed to center around the eight major types of teaching motivation and two teaching-related outcomes. In the interview, the student teachers were asked to choose among the eight motivations that are relevant to their own choice to be a teacher. They were also asked about their career plan in terms of years and effort to be invested in teaching.

2.3. Data analyses

Exploratory factor analysis with principal component analysis and oblimin rotation was conducted to extract the underlying factors of teaching motivation. Past studies have found that different types of teaching motivation are correlated (e.g., Fokkens-Bruinsma & Canrinus, 2012b; Lin et al., 2012), so oblimin rotation was preferred over orthogonal rotations to obtain more meaningful factors. The number of factors was determined according to the eigenvalue (larger than 1), the scree plot, the internal consistency as measured by Cronbach's alpha and the interpretability of the factors. To include more representative items in the factors and thus enhance their interpretability, instead of the usual minimum factor loading of .30, only items with at least .40 loading on a factor and that did not cross-load on other factors were selected (Hair, Black, Babin, & Anderson, 2010). The relationship between different teaching motivations and teaching-related outcomes was examined by means of the correlations between the two constructs.

Interview data of the seven cases were coded and categorized with reference to the types of teaching motivation chosen by student teachers and their planned engagement in future teaching. Constant comparison (Glaser & Strauss, 1967) of the data categorized was made in each case and across cases to understand the student teachers' teaching motivations in relation to their intended career engagement. In the data analysis process, the research team members cross-checked the coding of responses and the categorizations, and discussed insights gained from data coding for each student teacher and comparison across student teachers. With back-and-forth discussion, the research team arrived at consensus of interpreting the entire constellation of motivations and their relationship to the planned engagement for the student teachers.

3. Results

3.1. Teaching motivations of pre-service teachers in Hong Kong

Following the criteria described in Section 2.3, eight factors that accounted for 64.53% of the variance were generated. All factors have satisfactory internal consistency ($\alpha = .70$ to $.88$). The constituting items, Cronbach's alpha, mean and standard deviation of the teaching motivation factors are shown in Table 2. The factor loadings are given between brackets.

The eight empirically derived teaching motivation factors can readily be divided into a few broader categories which have been discussed in the literature. These include altruistic motivation, intrinsic motivation, extrinsic motivation, socialization influences and fallback career. The most important motivation that inspired the student teachers to choose teaching was their altruistic desire

Table 1
Demographic characteristics of the participants in the study.

	Gender		Age		Full-time teaching experience (in years)	Teaching related work experience (in years)
Whole sample (N = 132)	M	40 (30.3%)	20–24 ^a	53 (40.2%)	1.23	2.3
	F	92 (69.7%)	25–29	66 (50%)		
			Over 30	12 (9%)		
			No response	1 (0.8%)		
Interviewee sample (N = 7)	M	3 (42.8%)	20–24	1 (14.3%)	1.71	4.71
	F	4 (57.2%)	25–29	4 (57.1%)		
			Over 30	2 (28.6%)		
			No response	0		
Pansy	F		25–29		1	6 years
Sunny	M		30–34		0	A few weeks
Simon	M		35–39		10	12 years

^a Participants were asked to indicate their age in range, e.g. 20–24, 25–29.

Table 2

Items, Cronbach's alpha, mean and standard deviation of the teaching motivation factors.

Items	Mean	SD
Altruistic – serving next generation (7 items, $\alpha = .88$)	4.84	.75
QB30 Teaching allows me to influence the next generations (.872)		
QB50 Being a teacher can help improve society (.728)		
QB20 Teaching is a meaningful job (.630)		
QB37 Teaching gives me a chance to serve as a positive role model for children/youth (.622)		
QB10 I want to help children/youth in their development (.543)		
QB39 I believe I have the necessary abilities to be a good teacher (.536)		
QB26 I like the subject(s) I teach (.415)		
Intrinsic – interest in subject taught (3 items, $\alpha = .78$)	4.50	.94
QB4 I want others to be interested in the subject(s) I teach (.720)		
QB9 The subject(s) I teach is/are important for students (.703)		
QB3 Good teachers are much needed (.641)		
Intrinsic – interest and competence in teaching (4 items, $\alpha = .76$)	4.35	.85
QB35 Teaching is my childhood dream (–.583)		
QB25 I like teaching (–.449)		
QB47 My own positive learning experience motivates me to enter teaching (–.443)		
QB29 I am good at the subject(s) I teach (–.440)		
QB24 I feel more competent in teaching than in other jobs (–.440)		
QB42 I am inspired by my primary/secondary teacher to become a teacher (–.403)		
Extrinsic – salary & stability (4 items, $\alpha = .70$)	4.28	.79
QB1 The salary is relatively high (.845)		
QB2 After pursuing an educational degree, it is natural that I become a teacher (.621)		
QB5 It is a stable job (.520)		
QB6 Teachers are generally respected (.409)		
Socialization influences (4 items, $\alpha = .76$)	4.11	1.03
QB18 My friends think that teaching is a suitable career for me (–.630)		
QB14 I can build up rapport with students easily (–.562)		
QB12 Teaching harmonizes with my religion (–.521)		
QB36 My parents think that teaching is a suitable career for me (–.404)		
Intrinsic – multifaceted & stimulating job nature (5 items, $\alpha = .77$)	4.04	.84
QB27 The skills I acquire in teaching can be transferred to other jobs in the future (–.680)		
QB31 Teaching involves various kinds of work and so is not boring (–.562)		
QB21 Teaching could help one “keep young at heart” (–.446)		
QB48 Teaching is intellectually stimulating (–.412)		
QB28 I can meet a lot of people as a teacher (–.407)		
Fallback career: teaching as an alternative (3 items, $\alpha = .73$)	3.67	.92
QB17 I like the work hours (.647)		
QB49 I was dissatisfied with work I had done in other fields (.513)		
QB7 I was trained for another field but could not get a job (.449)		
QB18 Teaching can help me develop character (.430)		
Fallback career: teaching as a provisional, non-committed option (5 items, $\alpha = .78$)	2.80	.89
QB40 Teaching is my last-resort career (.747)		
QB44 It is relatively easy to enter a teacher education programme (.653)		
QB34 I am unsure of what job I want and will teach/study teacher education teaching for the time being (.628)		
QB15 Teaching fits well with my personality (–.514)		
QB46 Most people who study my major in undergraduate programmes enter teaching (.474)		

to serve the next generation and to improve society. Three sub-types of intrinsic teaching motivation with different degrees of importance were found, namely subject-matter motivation (Rones, 2011), interest and perceived competence in teaching, and the multifaceted and stimulating features inherent in teaching. The intrinsically oriented motivations that embodied a strong personal interest in the subject taught and in teaching itself were second and third in their rated significance that influenced the participants when they chose teaching, whereas the perceived job nature of teaching was sixth in importance. The third kind of teaching motivation focuses on the extrinsic benefits associated with teaching such as high salary and job stability. This factor ranked fourth among the teaching motivations, followed by socialization influence, i.e. encouragement from significant others such as friends and parents.

The two remaining factors that are lowest in importance seem to be related to fallback career. One of them is made up of the items “I was dissatisfied with work I had done in other fields”, “I was trained for another field but could not get a job” and “I like the work

hours”. Teaching was selected after the respondents had faced setbacks in other jobs and turned to teaching as an alternative that may bring improvement. This factor is therefore labeled “Fallback career: Teaching as an alternative”. The least important factor is composed of items which suggest that teaching is not a preferred career but a temporary solution, e.g. “Teaching is my last-resort career” and “I am unsure of what job I want and will teach/study teacher education for the time being”. It is therefore named “Fallback career: Teaching as a provisional, non-committed option”. Respondents have settled for teaching for the time being but would happily switch to other jobs because they were not committed to teaching. Although this factor sounds more cynical than Fallback career: Teaching as an alternative, both of them share the common denominator that teaching is an unwilling option for individuals to fall back on due to the unavailability of or dissatisfaction with other careers or the uncertainty of one's career goal, and corresponds with the meaning of a fallback career as proposed by researchers (Klassen et al., 2011; Müller et al., 2009; Sinclair et al., 2006; Watt & Richardson, 2012).

3.2. Relationships between teaching motivations and teaching-related outcomes

Teaching-related outcomes of the pre-service teachers were measured by their intention to stay for a long time and to exert much effort in future teaching. The means of the 'stay long' intention and effort exertion were 4.75 and 5.06 respectively, which are high on the 6-point scale, showing their general intention to have deep engagement when they teach later. These two outcomes are positively correlated with each other ($r = .623, p < .01$).

To examine the relationship between different teaching motivations and teaching-related outcomes, correlations between the two constructs were calculated (Table 3). Altruistic motivation and intrinsic motivation in terms of interest and perceived competence in teaching and the job nature of teaching had the highest positive correlations with both outcomes, followed by subject matter motivation. Those who chose to teach because of pro-social causes and intrinsic reasons were more likely to stay longer and to put in more effort when they become teachers. These motivations can be considered adaptive because of their association with more lasting and deeper professional engagement (Sinclair et al., 2006) and are similar to what Fokkens-Bruinsma and Canrinus (2012a) have found. No significant correlations were found between the two teaching-related outcomes and extrinsic motivation and Fallback career: Teaching as an alternative. For student teachers who entered teaching for extrinsic benefits and who perceived teaching as an alternative out of frustration with other jobs, no estimate of projected engagement can be made. However, the significant negative correlation between Fallback career: Teaching as a provisional and non-committed option with both outcomes allows the prognosis that the more pre-service teachers regarded teaching as an uncommitted temporary choice, the less prepared they were to exert effort in teaching and the shorter period of time they planned to remain in the job. The negative professional engagement connected with this aspect of a fallback career makes it a clear case of maladaptive motivation (Sinclair et al., 2006).

The different patterns of outcome correlation for the two kinds of fallback career are noteworthy. While past research classified fallback career motivation categorically as maladaptive (Fokkens-Bruinsma & Canrinus, 2012a; König & Rothland, 2012), the results in this study suggest that caution is needed in making this sweeping conclusion. Instead of a single fallback career motivation, differentiating it into two finer types is recommended because of their divergent relationships with teaching-related consequences. For those who chose teaching to fall back on after negative experiences in other jobs or in job-hunting (Fallback career: Teaching as an alternative), teaching is neither their first-choice career nor a negative last possibility. If teaching turns out to be satisfying, they may increase their engagement in this profession. The lack of a significant correlation between this kind of fallback career

motivation and planned engagement in future teaching gives some hope of a positive attitude and behavioral change after actual involvement in teaching. On the other hand, those who opted for teaching because it is a convenient option (Fallback career: Teaching as a provisional, non-committed option) were characterized by a lack of planned engagement in teaching as indicated by the negative correlation between this type of fallback career with teaching-related engagements. The diverse outcome correlations of these two types of fallback career motivation mean they are not equally maladaptive and should not be treated as a unitary motivation.

Further analyses strengthen the view that there are two distinct types of fallback career motivation. When the correlations among the teaching motivations were examined, the two fallback career motivations had different correlational patterns with other types of teaching motivations (Table 3). Fallback career: Teaching as an alternative was positively correlated with all other motivational factors. However, Fallback career: Teaching as a provisional, non-committed option has a positive relationship only with Fallback career: Teaching as an alternative and with socialization influence, while having a significant negative association with altruistic motivation. These correlations add to the concern about the adaptiveness of Fallback career: Teaching as a provisional, non-committed option. For individuals who regarded teaching as an alternative, they were motivated by altruistic, intrinsic and extrinsic motivations as well. When the teaching-related outcome correlates of these motivations are taken into account, the grouping together of Fallback career: Teaching as an alternative with the adaptive altruistic and intrinsic motivations opens up the possibility that the planned professional commitment related to these motivations, if strong enough, may "spill over" to the engagement-neutral motivation of Fallback career: Teaching as an alternative and give rise to increased professional engagement even for those who do not initially perceive teaching as their preferred career. This prospect is less likely for Fallback career: Teaching as a provisional, non-committed option, as indicated by its negative correlation with the adaptive altruistic motivation and its positive correlation with socialization influences whose correlation with the teaching-related outcome of staying long in teaching alone does not make it a clearly adaptive teaching motivation. Furthermore, while the correlation of the two fallback career motivations reaches significance level, the magnitude of their correlation does not suggest a high degree of similarity between them. In fact, a paired sample *t*-test indicated that the mean of Fallback career: Teaching as an alternative is significantly higher than that of Fallback career: Teaching as a provisional, non-committed option ($t = 9.08, df = 130, p < .000$). Taken together, these findings substantiate the argument that the two types of fallback career are independent of each other and the hitherto conceptualization of a single fallback career motivation needs to be revised. This may help to explain why

Table 3
Correlations between the motivational types and teaching-related outcomes.

	1	2	3	4	5	6	7	8
1. Altruistic – serving next generation	—							
2. Intrinsic – interest in subject taught	.569**	—						
3. Intrinsic – interest and competence in teaching	.621**	.477**	—					
4. Extrinsic – salary & stability	.186*	.286**	.235**	—				
5. Socialization influences	.381**	.374**	.448**	.413**	—			
6. Intrinsic – multifaceted & stimulating job nature	.478**	.447**	.504**	.192*	.494**	—		
7. Fallback career: teaching as an alternative	.249**	.291**	.366**	.177*	.404**	.429**	—	
8. Fallback career: teaching as a provisional, non-committed option	–.223*	–.010	.013	.112	.183*	.104	.257**	—
9. Stay long in teaching	.318**	.198*	.323**	.069	.198*	.317**	.132	–.330**
10. Exert effort in teaching	.459**	.173*	.347**	.005	.129	.312**	.100	–.326**

* $p < .05$; ** $p < .01$.

“the fallback career subscale [of the FIT-Choice scale]...showed small deficits of reliability” (Watt & Richardson, 2012, p.190).

3.3. A deeper look into the motivation of fallback career and teaching-related outcomes: analysis of interview data

For the purpose of gaining a deeper understanding of the complexity of a fallback career, we looked into the three cases (Simon, Sunny and Pansy) in which the student teacher affirmed that Fallback career: Teaching as a provisional choice was one of their reasons for becoming teachers. By putting together all the motivations that they deemed personally relevant, their motivation profiles are shown (Table 4). What follows is an analysis of these profiles in relation to their career plans.

Among the three interviewees, the reason for Pansy's choice of teaching as a provisional solution is most similar to what has been postulated by researchers. Being a major in philosophy, it was difficult for her to find a job directly related to this discipline. Changing to fields with more job offers was not easy because this necessitated the taking of additional examinations. When her friends registered for PGDE programmes, she followed suit. The role of socialization influence which was found in the correlational analysis can also be observed.

My major Philosophy is not widely chosen by students. It has nothing to do with commerce or finance. Even if I choose to work in the insurance or accounting sectors, I need to study and take examinations again. Moreover, many of my classmates took up PGDE at that time because it was quite difficult to get a job. (Pansy)

As Pansy opted for teaching because she could not find other jobs, her anticipation of limited engagement in future teaching is not surprising in view of the significant negative correlation between Fallback career: Teaching as a provisional, non-committed option and teaching-related engagement. However, it was not the lack of interest in teaching, but the arduous demands on teachers and the insecure job prospects that made her feel overtaxed and not believe she would stay long or exert much effort as a teacher in the future.

[sigh]...To be a life-long career, it should be possible outside Hong Kong. But in Hong Kong, I really don't know how long I can put up with it. Frankly speaking, new teachers have no choice... they are on contract. But if you have to renew your contract every year, I really don't know how long I can have the position. ...Family after all takes up more time in life. I'm young now and can fully dedicate myself to the job. Can I still do so later? I can't guarantee. I feel I can't do this job for long, not because I don't want to, but because you feel in the situation...working like this you'll become either half-dead or you'll lose your family and your friends. ...How much effort will I put into future teaching? Now it's a large extent, definitely 80–90%. But even I myself do

not dare to say when I'll leave the job, or only so some work that assists teaching. (Pansy)

For the other two interviewees, their unique personal background/experience explained their choice of teaching as a provisional option. Simon had already attained a post-graduate teaching qualification in Mainland China and had 10 years of teaching experience there. These, unfortunately, did not help him to secure a teaching position after coming to Hong Kong. He has had grave difficulties in finding other jobs, although he did manage to find one in the end. In despair, re-joining the teaching force via gaining a professional qualification in Hong Kong became the only option left for him.

After coming to Hong Kong, I still tried to teach, and so I had looked for a teaching-related post. But teaching in Hong Kong is different. My teacher training [in Mainland China] was not recognized. But I still wanted to teach because I like it. But there was no opportunity.... I wanted to look for another job. But it took me two to three months to find one. When I looked for a job, people either said I did not have experience or I was too old. I tried to be a guard and they said I'm overqualified and did not offer me training. So I had no other choice. I had rich experience in teaching, and therefore I returned to teaching and applied for the PGDE. (Simon)

Sunny did not have full-time teaching experience before taking up the PGDE programme. His teaching experience was limited to a few weeks as a substitute teacher and the teaching practicum in the PGDE programme. From his teaching practicum school, he got the impression that currying favor with his superiors was necessary in order to find a teaching post in that school. As this was not his way of doing things, he saw himself at a great disadvantage and did not have a real chance to be employed as a teacher, at best as a teaching assistant. Teaching became a non-choice for him.

If you want to get a teaching post in your teaching practicum school, you have to socialize with the teachers. I don't like to do this. Some said “Brown-nosing is necessary. That's how our society functions. You can have ideals about what things should be like, but when you work, your boss likes to be flattered”... I sometimes think they are too realistic. Compared with them, I'm... I don't really have a choice. But I decided to be bold and that I am not going to be a teaching assistant. So... I have no other choice. I can only choose not to choose. (Sunny)

Both Simon and Sunny were clearly interested in teaching. It was the harsh reality that deterred them from having much hope to find a teaching post. The seemingly insurmountable problem of finding a teacher post made them so desperate that teaching became a last resort for them. But contrary to Pansy and the quantitative findings, their enthusiasm and willingness to exert effort in teaching were not compromised. Simon had long considered teaching his life-long career. Despite the frustrations in finding

Table 4

The motivational profile and planned engagement in future teaching of the interviewees who have chosen Fallback career: teaching as a provisional, non-committed option.

	Fallback career: teaching as a provisional, non-committed option	Altruistic – serving next generation	Intrinsic – interest in subject taught	Extrinsic – salary & stability	Intrinsic – multifaceted & stimulating job nature	Intrinsic – interest and competence in teaching	Socialization influences	Fallback career: teaching as an alternative
Simon X		X	X		X	X	X	X
Sunny X		X	X					
Pansy X				X		X	X	X

a teaching position in Hong Kong, he would fully exert himself if he could find a teaching post.

In the past I had always regarded teaching as my life-long career. But since I came to Hong Kong, I had searched for jobs for over a month and came across a lot of difficulties. My belief faltered, and I thought of giving up teaching... Talking about teaching in Hong Kong, I will definitely apply all my effort to teach well. However I was not given an opportunity here. (Simon)

Sunny was eager to share his interest in art with students. This made him realize that he actually had a mission, a vision and even a passion for teaching art.

I chatted with my friends recently and found I'm the kind of person with a mission, with a vision. It is because... I told my students that between doing art myself and discussing art with you, I prefer to discuss art with you. So... it seems there's a kind of passion here. (Sunny)

Although all three of them said that Fallback career: Teaching as a provisional option reflected their teaching motivation, only one was hesitant about the extent of engagement in teaching. The other two were eager to fully invest themselves. One might wonder what contributed to the divergence in their planned engagement. Apart from the different reasons underlying their choice of Fallback career: Teaching as a provisional option, significant clues could be obtained when the attention is shifted from a single motivation to the entire constellation of motivations, i.e. their motivation profile. A comparison of their motivation profiles shows some clear-cut similarities between Simon and Sunny and some uniqueness in Pansy's motivation profile. Both Simon and Sunny were motivated by the altruistic aspiration to bring a positive influence on students and their deep intrinsic interest in the subject they taught. Extrinsic benefits like salary and status were not the primary incentive in their career choice. These benefits, on the other hand, were a key concern in Pansy's decision to enter teaching.

In the interview, Simon and Sunny clearly ascribed a higher priority to the altruistic value of teaching in facilitating the development of students and society than concrete monetary gains.

Teachers exert some influence on the thinking and development of people. Teachers may not have high status or salary, but what they do may affect the whole life of a person, and with this they affect the whole society. Society needs education and teachers. So I want to be a teacher. (Simon)

I thought concrete things like money are not entirely unimportant. They are not the first priority in my consideration. Although having a high-salary job seems to be happy and stable, I don't do the job because of money. I tend to think in terms of an ideal. I want to be a teacher because I think this is a meaningful job. I want to influence the next generation and improve society. (Sunny)

In addition, they have explicitly expressed their strong interest in the subjects they taught and their belief that teaching provided a prime avenue to share their subject-passion with students. Being able to do so brought them intrinsic enjoyment.

Ever since I learned English, I found English very interesting and very beautiful, and I have liked English a lot since then... That's why being a teacher is very fulfilling, and it explains why I want to be a teacher. (Simon)

I like the subject I teach, whether it is creativity or drawing techniques. I myself like art very much. I feel that this subject is very important to them [students]. I hope other people will become interested in this subject, and I enjoy communicating with them about the learning of visual art in the process. (Sunny)

In contrast, Pansy mentioned neither the wish to serve students or society nor interest in the subjects she taught (English and General Studies) in the interview. The higher starting salary of teachers and the salary increment of around \$2500 HK dollars (about 300 US dollars) after attaining the professional teacher qualification were the major considerations for her enrollment in the teacher education programme.

The economy was not that good in 2009. The starting salary for teachers was indeed relatively higher. ...Some of my classmates started working after graduation and earned only about HK\$7000–8000 [US\$ 900–1000]. After studying the PGDE, the salary is really much better. (Pansy)

Analysis of the interview data revealed findings that are partly consistent with and partly deviate from other research and the quantitative findings of this study. It broadens our knowledge of what prompts pre-service teachers to choose teaching as a fallback career in the sense of a provisional choice. More importantly, respondents have made it clear that choosing teaching as a provisional option does not necessarily mean less commitment in future teaching. It depends on the other teaching motivations that make up the complete motivation profile. If altruistic motivation and intrinsic interest in the subject taught also have a strong presence in the motivation system, they seem to be able to offset the maladaptive outcomes associated with teaching as a fallback career.

4. Discussion

Unlike many countries that do not have enough teachers, the declining enrollment in both primary and secondary schools in Hong Kong has led to a teacher surplus. We were interested in whether the reasons that motivated preservice teachers to choose teaching in this context and their relationships to teaching-related outcomes in terms of planned engagement in future teaching would be similar to countries with a teacher shortage. Factor analysis of a newly developed questionnaire yielded eight kinds of teaching motivation. The most important was the altruistic aspiration to contribute to the development of their students and society. The challenge of a tight job market for teachers does not stop the teacher aspirants from caring most about whether teaching makes a difference in society. This idealistic stance is also reflected in the higher importance attached to the intrinsic motivations of subject matter interest and interest in teaching than extrinsic incentives which is noteworthy in view of the high starting salary of teachers in Hong Kong. For these pre-service teachers, the meaningfulness of the job and personal fulfillment count more than material gains. This pattern of priority actually makes good sense in a stringent employment situation. Without the conviction that teaching is socially worthwhile and personally satisfying, the student teachers would not have knowingly ventured into a profession that was known to be stressful and have limited vacancies. With such an emphasis on altruistic ideals and personal fulfillment, the secondary role played by other people's influence in their career choice and the low importance of fallback career motivation fit well into the picture. This result is largely consistent with other studies with pre-service teachers in Hong Kong (Chan, 2006; Gu & Lai,

2012; Lam, 2012) and with their counterparts from countries where teacher redundancy is not an issue (e.g., Cooman et al., 2007; Kilinc et al., 2012; König & Rothland, 2012; Lin et al., 2012; Müller et al., 2009; Thomson et al., 2012). The current study makes it clear that altruistic and intrinsic motivations are the paramount forces that draw individuals into the teaching profession, regardless of whether there is an excessive or insufficient supply of teachers.

Concerning the teaching-related outcomes, the key teaching motivations – altruistic and intrinsic – were related to higher planned professional commitment and are clearly adaptive (Sinclair et al., 2006). This finding adds to the limited empirical data about adaptive teaching motivation in contexts of different demand–supply relationships. If teacher aspirants are primarily motivated by altruistic and intrinsic reasons, regardless of the demand for teachers in the job market, they are prepared to devote themselves to their profession. The findings for extrinsic motivation are less conclusive. Whereas it was positively correlated with some teaching-related outcomes in the study of Fokkens-Bruinsma and Canrinus (2012a), no relationship was found in the current study. Other studies (e.g., Chan, 2006) have reported a negative relationship of extrinsic motivation with teaching commitment. The inconclusive consequences of extrinsic teaching motivation call for more research to clarify its role.

A major new finding of this study is the identification of two distinct types of fallback career. So far this teaching motivation, if included in a study at all, has been assumed to be a unitary construct. It denotes teaching as a last resort for individuals to fall back on (Klassen et al., 2011; Watt & Richardson, 2012). As teaching is not chosen willingly and was associated with low professional engagement and simplistic beliefs about teaching (Thomson et al., 2012), this motivation was regarded as maladaptive (Fokkens-Bruinsma & Canrinus, 2012a; Sinclair et al., 2006). Different reasons have been proposed to account for why people have this motivation. Some choose teaching because they are unable to find a position in their favorite profession (Klassen et al., 2011; Watt & Richardson, 2012). Some may be unhappy with other jobs they have done and the ease of entering teaching induces them to try teaching (Sinclair et al., 2006). Some take teaching for granted because this is what they have studied (Müller et al., 2009). The possibility that this variety of reasons behind choosing teaching as a fallback career may mean there is more than a single kind of fallback career motivation has not been previously explored. In view of this, Watt and Richardson's (2012) concern about the unsatisfactory reliability of the fallback career subscale of the FIT-Choice scale ("the small deficits of reliability", p.190) underpins the meaningfulness of dividing the general fallback career motivation into two subtypes.

For people who were disillusioned by other jobs, changing to teaching may mean the launching of a new phase in their career, and they will be more ready to put effort into teaching if teaching suits them. On the other hand, those who view teaching as a temporary job or something that they will do anyway as a result of their study discipline may be less inclined to have deep engagement in teaching. Two factors along this line of reasoning were extracted from our factor analysis, namely Fallback career: Teaching as an alternative and Fallback career: Teaching as a provisional, non-committed option. That they represent independent dimensions can be ascertained from their very different correlations with teaching-related outcomes and with other teaching motivations.

In contrast to Fallback career: Teaching as a provisional, non-committed option, which correlated negatively with planned commitment in teaching and can be rightly classified as a maladaptive teaching motivation, Fallback career: Teaching as an alternative turned out to be unrelated to the teaching-related

outcomes examined in this study. Simply knowing that someone chooses teaching as an alternative does not shed light on the extent of his/her teaching engagement. Clues, however, can be found when the complete web of relationship among all teaching motivations is examined. Highly dissimilar correlational patterns of the two fallback career motivations were found. Fallback career: Teaching as an alternative had positive correlations with other types of teaching motivation. Given the unambiguous adaptive teaching outcome-correlates of altruistic and intrinsic teaching motivations, Fallback career: Teaching as an alternative may enjoy some "adaptive benefits" if its correlation with them is strong enough, so that their positive outcomes may "spill over" to this otherwise engagement-neutral motivation. This is not expected for Fallback career: Teaching as a provisional, non-committed option due to its unsystematic relationship with other teaching motivations and, above all, its significant negative relationship with altruistic motivation.

Some support for this hypothetical "spill-over" effect was found in the analysis of the interview data. From the three interviewees who affirmed that fallback career motivation represented one of their teaching motivations, two of them expressed clear dedication to teaching. At the same time, both of them were strongly motivated by altruistic ideals and intrinsic interest in the subject they taught as well. It seems that the "adaptive benefits" of altruistic and intrinsic motivation outlined above have counter-balanced the possible negative outcomes of fallback career motivation. More remarkably, the "spill over" effect materialized not in conjunction with the neutral Fallback career: Teaching as an alternative motivation, but with the maladaptive Fallback career: Teaching as a provisional, non-committed option. This shows the "spill over" effect of altruistic and intrinsic subject matter motivation more convincingly. Although the specific personal background of these interviewees, Simon and Sunny, prompted them to perceive teaching as a provisional choice, their fervent altruistic motivation and keen interest in their teaching subject seem to be more than enough to act as an antidote to defuse the negative effects on teaching engagement arising from perceiving teaching as a provisional last resort.

This analysis speaks eloquently for the importance of bearing in mind that behaviors are over-determined (Harre, Clark, & De Carlo, 1985). What one does, including making a choice, is usually affected not by one, but by a multitude of motivations. The possible outcomes associated with teaching motivations, especially less explored ones such as fallback career motivation, cannot be sufficiently understood in isolation, but in the constellation of different related motivations which forms the motivation profile. The more completely the motivation profile of individuals can be portrayed, the more accurately can their behavior and choices be understood.

There are some limitations to this study. The findings are based on a cross-sectional study of a relatively small sample of pre-service teachers. The experience of the three pre-service teachers that provided data for the antithetical relationship between Fallback career: Teaching as a provisional, non-committed option and altruistic and subject-matter motivation has limited generalizability to other pre-service teachers. Expanding the sample to a larger number of teachers at different stages of their career development and with diverse backgrounds can broaden the data base and advance the conceptualization of teaching motivation. It would be interesting to study what fallback motivation looks like among, for example, experienced in-service teachers and student teachers in Bachelor of Education programmes.

Secondly, teaching motivations and commitment change over time, even in the short time-span of a semester in initial teacher education (Sinclair, 2008). The present study provides a snapshot of what teaching motivations and related planned engagement were

like at the end of a one-year PGDE programme. Without data on what they were like at the earlier stage of their study, changes in their teaching motivation and planned engagement in teaching in the course of the teacher education programme cannot be charted. To do this, a longitudinal study that compares different levels of teaching motivation and planned engagement at different time-points, together with data about the conceptual and practical components of the teacher education programme that may have a bearing on the changes, would provide valuable information on the design and implementation of the teacher education curriculum that encourages the development of adaptive teaching motivation and deep engagement.

The motivation profile in the current study was uncovered by qualitative analysis of interview data. Conducting interviews is resource-intensive and the data obtained, while rich and in-depth, are less apt for the building of representative typologies of teachers. For this purpose, a few larger-scale quantitative studies that used more sophisticated statistical methods, e.g. cluster analysis, have been conducted to study motivation profiles (e.g., Kieschke & Schaarschmidt, 2008; Thomson et al., 2012; Watt & Richardson, 2008), and revealing results have been reported. This could be the next step in our study which would also allow cross-cultural comparison of teaching motivations. Nevertheless, the value of qualitative data analysis should not be downplayed. Clusters that reveal combinations of motivations and other variables are formed according to the statistical properties of data (e.g., similarity or distance measures). The motivations that are of interest in a study, e.g. altruistic, subject-matter interest and fallback career motivations as in this study, may not be grouped together if they do not fulfill the statistical requirements. It is therefore recommended to combine quantitative with qualitative approaches in future studies of teaching motivations to provide not only breadth and depth in the analysis, but also to uncover new insights that enrich our understanding of teaching motivation.

5. Conclusion

The prime role played by altruistic and intrinsic motivations in pre-service teachers' choices to become teachers in Hong Kong fills a knowledge gap in the study of teaching motivation by providing data of a context in which teacher surplus has been a problem. The findings of the present study also tell us more about both adaptive and maladaptive teaching motivations. Altruistic and intrinsic teaching motivations can be regarded as adaptive teaching motivations because of their consistent correlations with positive teaching-related outcomes when there is both a teacher deficit and a surplus. More importantly, the present study adds to our understanding of the complexity of fallback career motivation. Two types of fallback career motivations have been identified in the current study. However, they are not equally maladaptive and should be conceptualized as independent. Finally, it clearly demonstrates the heuristic value of examining the complete teaching motivation profile in context, especially in the study of less-known teaching motivations such as fallback career motivation. We would have come to the same conclusion as other studies that fallback career motivation is maladaptive if the complete motivation profile of the interviewees had not been analyzed. But when Fallback career: Teaching as a provisional, non-committed option was embedded in the motivation profile characterized by strong altruistic and subject matter motivation, its possible maladaptive effects were canceled out.

This finding has significant implications for teacher education. While it is inevitable to have pre-service teachers who choose teaching as a temporary option with minimum commitment, the present study suggests that helping them to nurture altruistic

motivation and interest in their teaching subject may neutralize the possible negative teaching-related outcomes arising from their fallback career motivation. When teacher educators and mentors in fieldwork model teaching with altruistic enthusiasm and enjoy the subject they teach, they can influence the motivation of their students (Lunenberg, Korthagen, & Swennen, 2007; Tang, Cheng, & Cheng, 2013), facilitating the “spill-over” effect of altruistic and intrinsic subject matter motivations in students who initially considered teaching a provisional, non-committed option.

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